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ABSTRACT

Between 1985 and 1988 eight colleges implemented a "Thinking Across the Curriculum" program and a procedure for assessing the impact of the program on the cognitive development and thinking skills of students. One hundred and twenty faculty members participated in the project and approximately 1,800 students studied in courses developed as part of the program. The project's two goals were to help faculty improve and enhance their ability to teach thinking in traditional content based courses already part of the school curricula and to enable students to improve and enhance their thinking and reasoning skills by concentrating on the thought processes required of them in a variety of courses. Central program components were faculty development in student cognitive development, teaching and learning styles, and strategies for teaching thought in specific disciplines. A study of the program's impact included looking at student and faculty perceptions in a random selection of 26 courses and 506 students. The results suggested that courses with class sizes as large as 30 to 40 can be effectively revised to encourage vigorous thinking. Results also suggested that all fields of study can use a cross-curriculum program in teaching thinking. Appendixes comprising 90% of the document include evaluation/assessment plans, abstracts and course syllabi, plans for institutionalization, and sample articles and newsletters. (JB)

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Thinking Across the Curriculum: A Summary
of FIPSE Sponsored Project #G-00841209

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East Central Colleges
(formerly East Central College Consortium)
Heidelberg College
Tiffin, Ohio 44883

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Thinking Across the Curriculum: A Summary of FIPSE Sponsored Project #G-00841209 Developed by the Consortium of East Central Colleges [ECC] Professor Larry E. Grimes, Project Director [Bethany College]

Between 1985 and 1988 the eight colleges of the ECC[1] put in place on each campus a "thinking across the curriculum" program and a procedure for assessing the impact of the program on the cognitive development and thinking skills of our students. 120 faculty members (15 from each campus) participated in the project. Assuming an average course enrollment of 15, approximately 1,800 students studies in courses designed as part of this program.

The project had two goals:

1) to help faculty improve and enhance their ability to teach thinking in traditional content based courses already part of the curricula of the East Central Colleges;

2) to enable students to improve and enhance their thinking and reasoning skills by concentrating on the thought processes required of them in a variety of courses across the curriculum.

Certain assumptions about the nature of thinking and strategies for teaching thinking determined the path we took toward meeting our goals. First, we assumed that thinking, like writing, was a complex process and not merely a neat set of definable skills. Second, we assumed that students came to understand this process slowly and only after repeated exposure and experience with the process. Third, we assumed that students entered the process at different stages of cognitive development and carried with them different understandings of what it meant to think, to learn, and to know. Finally, we assumed that lively thought was always contextual and relational; therefore, it is best understood in particular disciplinary contexts and in specific thinking environments. These assumptions were made from reading scholars such as Belinsky, Brunner, Gardner, Gilligan, and Perry.

Because of our assumptions, we rejected the wide-spread idea that students should take a course in "critical thinking" or choose from among a list of courses a single course with a special "critical thinking component." Rather, consistent with our process model, we elected to saturate the curriculum with courses deliberately designed to foster self-conscious thinking among our students. In such a setting, we thought students would have a variety of experiences with "thinking" in various contexts, under different conditions, at different developmental stages, and even by different names. Ideally, students would be enrolled in courses designed to encourage thinking during each of their four years at college.

For us, faculty development was the key to student development. Most of the 120 faculty members who participated in the project reported that their graduate study had not included course work in student cognitive development, teaching/learning styles, or strategies for teaching thought in the discipline. Graduate study had, for most, focused on the content of the discipline and theory and method in the field.

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[1] Bethany College (WV), Heidelberg College, Hiram College, Marietta College, Mount Union College, Muskingum College, Otterbein College, and Westminster College.

The faculty development component of our project, therefore, focused on bridging this gap in faculty knowledge. With help from our wise and generous project consultant, Faith Gabelnick [Dean of the Honors College, Western Michigan University], we compiled and distributed reading for project participants, held workshops to guide them through the readings, and help them connect theory with practice as they worked to revise their courses. Once the faculty participants were familiar with basic concepts, they worked for at least one month during the summer in interdisciplinary teams on their home campus. Team members critiqued each other's syllabi and assignment sheets in excited, interdisciplinary dialogues. Then Professor Gabelnick meet with each team to enter the dialogue and provide yet another professional assessment of the course revision. Throughout the revision process, we assumed that the professor was the expert in her or his given field and that the experts task was to so revise and present a traditional content-based course that intelligent outsiders [colleagues from distant fields] could understand; and in which they could replicate, and practice the methods and discourse used to think in the scholar's field. This proved to be difficult, challenging, frustrating, exciting, and do-able.

In the process, participants found that they had made great leaps and assumptions as they asked students to "think" about the content of their fields. So great were these leaps and assumptions, that they lost highly intelligent colleagues outside the primary field, although colleagues in field often thought that all was explained clearly and effectively. Interdisciplinary dialogue, it appears, is essential if scholars are to begin to articulate clearly to the uninitiated how thinking is carried on in the context of particular disciplines. As we made syllabi and assignments clear to colleagues outside our fields, we also made them more and more accessible to the novices we teach.

Articulation of how one thinks about a particular subject matter was at the center of course revision. Course revision usually required some deletion of content material to make room for teaching "thought" about the subject matter. This proved quite frustrating, a bit risky at the outset, but faculty report that the trade-off was worth it, since the new approach encouraged more active, independent, long-term learning.

Equally important, we discovered was a solid understanding of the complex mix of teaching/learning/thinking styles within the classroom and the dissonant blend of cognitive levels among our students. Much attention was given in the project to understanding stages of cognitive development [Perry, Belinsky, Gilligan and others] as well as to teaching/learning styles (Kolb, Myers-Briggs and others].

The ECC is engaged in a longitudinal study of the impact of this project on student thinking skills and cognitive development. The design of the study is simple. The Classes of 1990, 1991, and 1992 on each of the 8 campuses were given both the Watson-Glaser Critical Thinking Skills Inventory and the Widick and Knefelkamp Measure of Intellectual Development Test early in their freshman year. They will be retested, using the same instruments, late in their senior year. Our working hypothesis is that, as more and more carefully revised "thinking" courses are introduced into the general curriculum and students have more contact with such courses across the curriculum student scores on both indicators will rise. No results significant results from this study will be available before 1992-93.

Presently, the ECC has studied both student and faculty perceptions of learning in a random selection of the newly revised courses. 26 courses were studied. 506 students were surveyed. The courses represented 13 different fields: biology, education, music,

English, religious studies, philosophy, history, chemistry, psychology, interdisciplinary studies, political science, business/economics, and French.

The results suggest that courses even as large as 30-40 can be effectively revised to encourage vigorous thinking. They also suggest that no field of study has a corner on the teaching of thinking. All can be readily assimilated into a cross-curriculum program in the teaching of thinking. Further, they suggest that content heavy courses, even courses requiring rote memorization of significant material, can be adapted so as to serve most effectively in a cross-curriculum model for the teaching of thinking. Clearly "content" and thinking are not mutually exclusive matters.

Factors which make courses most effective as "thinking" courses were not at all exotic or surprising. Two factors stood out from all the rest. To be effective as a "thinking" course, a course must be designed so that it encourages quite consciously and directly "thinking about what you know." Also, the most effective "thinking" courses require students to integrate what they are learning into course papers or activities. Careful articulation of the "thought processes of the discipline" coupled with active, integrative assignments which let students replicate the thought process are, then, essential to courses adapted to the needs of a cross-curriculum thinking project.

This may mean that less "content" is covered in order to allow time to articulate and assimilate the domain of thought/discourse proper to study of the subject. Faculty report that, although this is often the case, students have a far better grasp of content in the revised courses and are much more independent learners as a result of studying in the revised format.

It should also be noted that in the most successful "thinking" courses students reported with much intensity that they were required to think about their own values, about why others think differently from them, and about how facts or ideas were obtained in the course. Though less prominent than the two factors cited above, these seem to be important aspects of courses which best serve the needs of a content-based cross-curriculum thinking program.

Clearly there is much more we need to learn about this approach to the teaching of thinking. But preliminary results are encouraging. The model is cost-effective, it invigorates the faculty engaged in it, it respects and takes seriously the subject matter and special domain of discourse which lie at the heart of traditional disciplines, it makes the task of teaching thinking an all-college concern rather than the burden and property of single department or division of the college, and students resonate will to the approach.

The greatest problem with this approach is that it requires faculty to set aside considerable time for the study of student cognitive development, teaching/learning styles, and the thought structure and discourse of their own field. Further, it requires that faculty risk dialogue across disciplines about teaching in their own field. Anyone attempting to replicate this approach should expect some psychological resistance from the faculty, some skepticism about "all this pedagogy-stuff," fear that content loss will not be worth any cognitive gains, and doubt that the immense amount of time required of faculty to make the re-vision will be worth it.

The 120 ECC faculty who worked so hard to make this project a success will tell you , though I doubt in one voice, it was worth it--for us and for our students.

Thinking Across the Curriculum
A Project of the East Central Colleges (ECC)[1]
Fund for the Improvement of Post Secondary Education
Grant # E-G00841209

Narrative Summary of Project Activities
(What We Did)
November 1985-December 1988

The activities described below were undertaken to achieve two goals:

1) help faculty improve and enhance their ability to teach thinking in traditional content courses already part of the curricula of the East Central Colleges;

2) enable students to improve and enhance their thinking and reasoning skills by concentrating on the thought processes required of them in a variety of courses across the curriculum.

Planning Activities

During the fall and spring of academic year 1985-86 the campus coordinators of the East Central Colleges (ECC) writing project met regularly and often with the Project Director to design and implement Stage One of the project. In all, 8 meetings were held between November and May. At these meetings the coordinators developed "job descriptions" for themselves and for faculty participants in the project (see **Appendix A**), planned the first workshops, and discussed plans for evaluating the project. As part of our planning effort, the Coordinators and campus evaluation experts met with our project consultant on evaluation, **Dr. Glen Rogers of Alverno College**, in April of 1986. He listened to us articulate our needs and concerns and arranged to meet with the Project Director at Alverno in June to present a plan for evaluating the project. (See **Appendix B** for evaluation plan and assessment forms.)

Once the Coordinators had developed a "job description" for faculty participants, each campus was asked to recruit its first team of participants. As per our proposal, the teams were selected by the Dean of the Faculty on each campus to insure that the teams were interdisciplinary and were

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[1] At the time of this grant, eight colleges were part of the consortium: Bethany College (WV), Heidelberg College, Hiram College, Marietta College, Mount Union College, Muskingum College, Otterbein College, and Westminter College (PA).

composed of persons with sufficient credibility on campus to insure institutionalization of the project. Eight persons were recruited from each of the eight campuses for Team One. Team Two was recruited in the same way. Some campuses selected them at the same time, others waited until the fall of 1986 to select Team Two. (see **Appendix C** for a list of faculty participants). Team One included representatives from 18 departments; 32 were senior faculty; 13 were department chairs; 14 had attended workshops on critical thinking at the University of Chicago or elsewhere. The composition of Team Two was similar to that of Team One.

Deans at several ECC colleges expressed concern about how the theoretical works of Perry, Kolb and others could be translated into curricular and extra-curricular programs that would have a measurable on academic life. To address this issue and provide project participants with a "report from the trenches" look at the project we had undertaken, the Deans agreed to fund a workshop on cross-campus implementation of the Perry model. The Deans of all eight colleges were invited to attend this meeting, as were all 64 faculty participants. The workshop was presented on **26 April 1989** at Marietta College. **Professor Bruce Willats of Dominican College** (San Raphael, CA) led the workshop and reported on the results of his work at Domincan. The workshop was most helpful to us, alerting us to both possibilities and problems that might lie ahead.

May 25 and 26, after six months of careful planning, we held our first first workshop on the teaching of thinking across the curriculum. The workshop was held at Bethany College. Workshop leaders were Drs. **Faith Gablenick** (then at the University of Maryland; presently **Dean of the Honors Program, Western Michigan University**) and **Robert Rodgers (Ohio State University)**.

The purpose of the **May 25-26, 1986 Workshop** was to provide the 64 faculty participants with access to the skills and theories they would need as they revised a traditional, content-based course in their effort to improve thinking in their classroom. Prior to the workshop the participants were sent a packet of materials which included articles by Kolb, Perry and others on teaching/learning styles, student cognitive development models, etc. They were all asked to complete both Kolb's Learning Style Inventory and the Myers-Briggs Type Inventory. At the workshop Gablenick and Rogers helped faculty examine various theories of cognitive development (special attention was given to the work of William Perry), interpret the inventories they had taken, and then apply the theories and models they had studied to specific teaching/learning situations. Most of session one was spent on "theories and models"; most of session two was spent on the nuts and bolts of

teaching. Time was also spent on how to do effective syllabus building and syllabus revision. Throughout the whole workshop, the central focus was on how knowledge of student cognition and of teaching/learning styles relate to the effective teaching of "thinking" in a content based course. At this workshop, in keeping with the philosophy of this project, our main concern was with the "process" of cognition, rather than with specific thinking strategies, and with methods of teaching which facilitate rather than retard this process.

During the **summer of 1986 each faculty participant revised a regular, content-based course** so as to make it a course which self-consciously focused on thought processes in the field and helped students to increase the sophistication with which they could think and work in that field. Each faculty member spend approximately **one month** revising the course. What made this effort at course revision special was:

1) faculty had prior training in student cognitive development and could revise their course to match the probable cognitive level of the students enrolled in their class;

2) faculty had advance training in alternative teaching/learning styles and preference (including an awareness of their own preferences and biases) and were able to consider alternative teaching/learning strategies as they developed course assignments;

3) faculty worked together regularly in interdisciplinary groups to evaluate, critique, and test out each other's revised materials;

4) faculty were able to review their course revisions with Project Consultant, Faith Gabelnick, and with off-campus peers prior to implementing the course.

In **August 1986** Faith Gabelnick met with participants in small groups to **review course revisions**. These sessions held on August 7 and 8 at Bethany College and on August 12 and 13 at Hiram College allowed each participant to receive feed-back on proposed revision from Professor Gabelnick and from peers. Two to three weeks of summer remained for faculty to incorporate suggestions into final course revisions.

On **27 September 1986** Team One participants met at Marietta College to share what they had learned as they revised their courses. This was **a nuts and bolts "showcase meeting"** at which individuals presented specific strategies they had designed to improve teaching in a course.

During the fall and early winter of 1986-87 the Project Director met with Campus Coordinators to evaluate the first phase of the project and to plan activities for 1987. Our primary "data base" for the evaluation was the extensive self-reflection on the project provided from abstracts faculty submitted of journals they kept while revising and teaching their courses. Reflection on the fine presentations made at the Marietta showcase, these journals, and information gathered in conversation with Team One participants let us to conclude that:

1) Team Two would benefit from a meeting with Team One for a "showcase" presentation and for an orientation to the project by those who had been through it--to that end plans were made to hold a meeting of both teams in Bethany on February 7-8, 1989.

2) Evaluations suggested that there was a need for some kind of mass, inter-campus orientation to the Project. This we thought we could incorporate into the February workshop.

3) Evaluations suggested that our spring workshop for Team Two could be improved it it was extended by one day and included sessions which focused on teaching strategies designed for teaching thinking in specific fields.

4) Evaluations suggested that the East Central Colleges could help faculty improve the teaching of thinking in content based courses if it could provide faculty with opportunities to study method and theory in their discipline, with an eye on how to articulate method and theory to students at the undergraduate level.

4) Faculty self-assessment indicated that this was a very successful faculty development program and seemed to have improved thinking in the classroom. (See **Appendix D** for data base.)

The **workshop held at Bethany on February 7-8, 1989** allowed members of Team One to share their successes with each other and Team Two; provided a mass forum for the Director to orient members of Team Two to the project and their role in it; time for members of Teams One and Two to discuss the project within field and across campuses; and a chance for Professor Gablenick to prepare Team Two for their workshop on thinking, learning, and course revision scheduled for April 1987.

Team Two met at Bethany on April 4,5,6. The content was similar to that of May 1986. Again the focus was on cognitive development (especially the work of William Perry), teaching learning/strategies (Kolb, Myers-Briggs, etc.) and procedures for course revision likely to improve student thinking within the confines of a traditional, content-based course. Our workshop leaders were Dr. Gabelnick and Drs. Kathe Taylor and Bill Moore. In addition, we also selected members of Team One to present "nuts and bolts" sessions on strategies for teaching thinking within specific disciplines.

During the **summer of 1987** faculty participants on Team Two (seven per college) worked individually and in interdisciplinary groups to **revise a regular, content-based course** so as to make it a course which self-consciously focused on through processes in the field and helped students to increase the sophistication with which they could think and work in that field. As in 1986, each person worked for approximately one month. In **August of 1987** members of Team Two met with Professor Gabelnick, first at Hei felberg College, then at Westminster College) and she reviewed and evaluated their course revisions.

From the fall of 1986 through the summer of 1987, Professor Gabelnick and Projector Director Grimes carefully reviewed and discussed the growing body of material produced by participants in the project: course syllabai, class assignments, abstracts from faculty journals, and presentations at showcases and workshops. They served as a screening committee to select presentation for the **October 16-17, 1987 "Showcase" at Otterbein College**. They also decided to video tape interviews with a small group of Project participants in an effort to better understand the cause, extent, and nature of the faculty renewal which the Project seemed to elicit. The presentations were among the best made and many were videotaped. (See **Appendix E** for a catalogue of interviews and presentations videotaped at Otterbein. Copies are available, at cost, upon request.)

The last meeting of project participants was held on **March 12-13 at Mohican State Park Lodge** in Ohio. Again, we used the time to **showcase** work by project participants. The highlight of the meeting, however, was a **presentation by and conversations with William Perry.** The quality of work presented at this meeting is very high and included very interesting reports from the sciences. Final evaluation materials were distributed and formal, funded, project activities ended.

Theory and Philosophy Underlying the East Central College Project in the Teaching of Thinking Across the Curriculum

(Why We Did It)

THINKING ACROSS THE CURRICULUM: A Project of the East Central Colleges

Several assumptions shaped the plan we adopted and implemented. First, we assumed that thinking, like writing, was a complex process and not merely a neat set of definable skills. Second, we assumed that students came to understand this process slowly and only after repeated exposure and experience with the process. Third, we assumed that students entered into the process at different stages of cognitive development and carried with them different understandings of what it meant to think, to learn, and to know. Finally, we assumed that lively thought was always contextual and relational; therefore, it is best understood in particular disciplinary contexts and in specific thinking environments.

Because of our assumptions, we rejected the wide-spread idea that students should take a course in "critical thinking" or choose from among a list of courses a single course with a special "critical thinking component." Rather, consistent with our process model, we elected to saturate the curriculum with courses consciously designed to foster self-conscious thinking among our students. In such a setting, we thought students would have a variety of experiences with "thinking" in various contexts, under different conditions, at different developmental stages, and even by different names. Further, students would, ideally, take courses designed to encourage thinking in each of their fours years of college.

To accomplish this end, the 8 ECC colleges selected 15 faculty from each of eight campuses (representing 15-30% of the full-time faculty) and asked them to attend workshops on teaching, learning, and cognitive development and to spend most of one summer revising a traditional discipline-based course so that course could and would foster self-conscious thinking. We were assisted by Professor Faith Gabelnick [our consultant par excellence] and a host of workshop leaders, including William G. Perry. Presently 120 courses have been revised thoroughly and completely . Faculty report that they have seriously reworked many others and have infected colleagues with their zeal to revise courses designed to encourage and support self-conscious thinking on the part of students.

More interesting than what we have done (design a program for teaching thinking across the curriculum), I think, is how we have done it. We have done it by paying careful attention to three things:

--how students think and learn
--how we as faculty think, learn, and teach

--how people within our area of study learn, think, and know.

To give shape to this process, I have designed what I call "a mantra for the teaching of thinking." It goes as follows:

I TEACH STUDENTS TO THINK ABOUT AND THROUGH (SUBJECT/COURSE)

I **TEACH** STUDENTS TO THINK ABOUT AND THROUGH (SUBJECT/COURSE)

I TEACH **STUDENTS** TO THINK ABOUT AND THROUGH (SUBJECT/COURSE)

I TEACH STUDENTS **TO THINK** ABOUT AND THROUGH (SUBJECT/COURSE

I TEACH STUDENTS TO THINK **ABOUT & THROUGH (SUBJECT/COURSE)**

An explication of this mantra will do much to explain the "how" of our project. To begin with the obvious, it is **"I"** who teach my students. And "I" have been trained to think in the discourse of a particular discipline; "I" have definite learning style preferences: "I" approach the task of thinking and knowing with a life style shaped by years of experience and experiment. "I" do not come neutral or neutered into the classroom. "I" am a presence and a power in the classroom capable of facilitating or frustrating the thought processes of my students. My awareness of how "I" prefer to think and know, and my ability to articulate how "I" prefer to think and know, will greatly influence whether or not thinking is facilitated or frustrated in my class. To help faculty come to terms with the "I" who teaches, we have used both David A. Kolb's Learning Style Inventory and the Myers-Briggs Type Inventory. From this experience, faculty have come to see how deeply "I"'s preferences influence teaching style, assignments, and classroom activities (or inactivities, as the case may be).

I **TEACH.** At all of the ECC colleges, that is the center of faculty life. And if the center does not hold .... But hold it can so long as we take pedagogy as seriously as we take the subject matter that we teach. In our proposal to FIPSE we admitted that our graduate education did not adequately prepare most of us to be teachers. So our project has provided faculty with an opportunity to learn more about teaching techniques and to discuss and share teaching strategies with colleagues from various disciplines. Again we have discovered the obvious: faculty become energized and empowered when and as they find an audience enthusiastic about the nuts and bolts of teaching.

STUDENTS. I teach students. How often I hear colleagues say, "I teach English" or "I teach Physics." Yet I do not know any dedicated teachers who really want to think and know in a room empty of students, however frustrating teaching can be when the learners are present as dense and solid mass. Still, for most of the ECC faculty, graduate school was not a place where "the student" was a topic for discussion. Ideas were at the center of that world. But in any good class, the student must be the center around which thinking, knowing, and learning turn. So, we have tried hard in our project to know more about how students think and learn. To that end, we have explored the work of Jean Piaget, David Kolb, William Perry, Carol Gilligan, and others; and we have used information gathered on such instruments as Kolb's Learning Style Inventory, the Myers-Briggs Type Inventory, and Widick and Knefelkamp's Measure of Intellectual Development. While many models have helped us to better understand our students, this project was focused on the work of William Perry in particular.

The mantra sentence is a very complex one. It deliberately stretches out a commonplace academic response to the question, what do you do? And because it does so, the last half of the mantra makes clear three very important things about the teaching of thinking. First, thinking occurs in a very complex context. A teacher/learner context. A teaching/learning context. And a thinking/discourse context that is discipline specific (sometime even course specific). **TO THINK** IS TO THINK IN CONTEXT. Different skill sets, different frames of reference, different methodologies, different domains of discourse take center stage as thinking is played out in first one arena of thought and then another.

Indeed, as one moves to the last phrase in the mantra. it is possible to consider **THINKING AS CONTEXT**. To speak personally for a moment, when I try to lead students into the intricate process of thinking about a poem, I am forced to admit with Marshall McLuhan that the medium is the message. Good thinking in biology will not do over here. Neither will good thinking is sociology. The context has changed and my students and I must come to grips with thinking in and as this new context. This is where constant and vigorous study within our disciplines pays off for us as teachers. We are the experts we need when it comes time to articulate for our students the nature of thinking in and as the context and contour of our field. Sometimes, however, as we discovered in our project, we neglect to build into our courses both the time and the strategies needed to insure that students learn to "think about and through" our discipline. Rather, we short-circuit matters and just teach "chemistry" or "mathematics." The result is frustration: frustration as too few students come to know and appreciate the

theory of the discipline that so excites us; further frustration as many students memorize and forget the "materials" we teach. Here our project suggests that, at least in some key courses in every department, the exploration of the process of thinking in the field must be central to the course. If we expect a very high order of thinking in our field, one "methods" course won't do it. For this reason, thinking across the curriculum is not only an agenda for the curriculum as a whole, it would appear to be an important item to put on departmental agendas as well.

Finally, a word about faculty response to this cross-curriculum thinking project. Journal abstracts submitted by faculty bear constant testimony to their renewal as teachers and to the empowerment they have been given now that they do more than "teach a subject." Some say that it is by far the best faculty renewal experience they have had to date. Second, ECC faculty report that the emphasis on who teachers and learners are, and on how they teach and learn has significantly and positively altered the environment in which they teach.

When teaching becomes contextual and relational, rather than content bound, affection touches the learning and thinking process. The result, I suggest, is love: love for each other, love for learning, a love of thinking, and love of the subject matter itself. That is where we have arrived at the end of our project. Not a bad ending, we think, from which to begin.

Evaluation of the ECC Thinking Across the Curriculum Project

(What We Have Accomplished and Why Think This Is So)

This project has two primary goals:

1) to increase the higher order reasoning skills of our students

2) to improve the quality of teaching in ECC courses, particularly as it relates to the teaching of thinking

Our effort to assess our progress toward meeting goal number one

(development of student thinking abilities) has taken two forms. One a self-reportorial analysis of thinking and learning in courses redesigned as part of this project. The other, a complex , objective longitudinal assessment of student cognitive development and their acquisition of thinking skills. Both assessment procedures are discussed below.

Description of ECC Longitudinal Study of the Impact of "Thinking Across the Curriculum Project"

In consultation with Glen Rogers of Alverno College, the ECC has designed a longitudinal study to measure the impact of this project on the cognitive development and thinking ability of our students. This study has begun but no useful results will be available until 1992 or 1993. Professor John Hull, Chr. of Psychology at Bethany College has agreed to coordinate the study.

On all eight campuses, the Classes of 1990, 1991, and 1992 were given the Watson-Glaser Critical Thinking Appraisal (Form A) as entering freshmen. As freshmen they were also given the Widick and Knefelkamp Measure of Intellectual Development (MID) test (essay AP). Students will take these same tests again at the end of their senior year. **Working hypothesis:** an effective cross-curriculum approach to the teaching of thinking should increase the aggregate score on these tests year by year as more and more courses in the curriculum are designed to consciously promote higher order reasoning.

Thinking Across the Curriculum
Student Perception of Courses

At the end of Fall Term 1988, faculty members participating in the Thinking Across the Curriculum project asked students to describe their experience as thinkers and learners in the newly designed courses. The results of this survey are reported below. (For survey forms and data summaries see **Appendix F**).

- ☐☐ faculty from 6 of 8 ECC colleges surveyed students
- ☐☐ 26 of the 120 faculty (21%) surveyed classes
- ☐☐ 502 students were surveyed
- ☐☐ class size ranged from 8 to 49, avg. class size - 19
- ☐☐ courses from 13 different fields were included in the survey
  (biology, education, music, English, religion, philosophy, history, chemistry, psychology, interdisciplinary studies, political science, business/economics, and French)

Nature of the Statistical Report:
Students responded to 15 questions about their experience in the course. In an effort to determine the intensity of student response to the questions asked, a 1-7 rating scale was used. In a further effort to determine the intensity of student response and to filter out fuzzy answers and eliminate student bias toward favorable responses, I reviewed the data provided by students and then calculated and reported in the table below the percentage of students in each class who assigned a 6 or 7 rating [very intense positive response] to the question.

Highlighted below are those items in the survey to which over 50% of the students surveyed rated 6 or 7 on the scale. Also highlighted are those with very intense negative responses.

TABLE ONE - INTENSITY OF STUDENT RESPONSE TO COURSE OUTCOMES

PART ONE
To what extent, if any, did this course make a difference in each of the following?

Scale of Response: none 1 2 3 4 5 6 7 greatly	
1. How you think about what you know	33% - 6-7 rating
2. How you respond to differences in opinion	30 % - 6-7 rating
3. How you discuss ideas with others.	41% - 6-7 rating
4. How your think about what you do.	34% - 6-7 rating

PART TWO
To what extent, if any, are each of the following characteristic of you as a learner?

Scale of Response: none 1 2 3 4 5 6 7 greatly	
5. I ask questions even if there may be some risk.	**29% - 6-7 rating**
6. I place the burden for learning on my teacher.	**5% - 6-7 rating**
7. I assess my won strengths and set my won learning goals.	**51% - 6-7 rating**
8. I apply what I learn outside the classroom.	**56% - 6-7 rating**

PART THREE
To what extent, if any, did this course require you to do any of the following?

Scale of Response: none 1 2 3 4 5 6 7 greatly	
9. Think about your own values.	43% - 6-7 rating
10. Think about what you know.	**58% - 6-7 rating**
11. Memorize course material.	**36% - 6-7 rating**
12. Think about why others think differently.	46% - 6-7 rating
13. Think about how the facts or ideas in this course were obtained or came about.	42% - 6-7 rating
14. Consider contradictory facts.	**51% - 6-7 rating**
15. Integrate what your are learning into course papers or activities [Eg. labs, field experiences, research projects].	**60% - 6-7 rating**

Observations, Conclusions, and Speculations Based on the Student Survey

First, let me be quick to say that student response to all 26 courses was quite favorable. When I speak here of the five most successful and the 5 least successful courses, I am distinguishing among courses which were all well received. Better than average teaching seems to have been the case in all courses, but even within the dominion of good teaching some courses stood out from the crowd as exceptionally succsssful "thinking across the curriculum" models, at least from the perspective of our students.

The students surveyed perceive themselves to be active, independent thinking people. More than half of the students surveyed reported agreement with all indicators related to active, critical thinking (see **Table One above**).

Further, very intense responses were recorded in response to 8 of the 15 indicators (see figures highlighted above). In these 8 categories, more than half of the students in each class registered the most intense or next most intense response available to them (6 or 7 if positive; 1 or 2 if negative).

Student Learning Styles - Intense Positive/Negative Responses

Students enrolled in these courses reported themselves to be independent learners who place the burden of learning of themselves and not on their teacher (94%); said they assessed their own strengths and set their own learning goals (51%); and attempted to apply what they learn in settings outside the classroom (56%). Although they describe themselves as active, independent learners who do make connections between the classroom and the larger world, they also indicated that their activity and independence were circumscribed by intellectual caution. 71% indicated with intensity that they would NOT ask questions if there might be some risk. What this information suggests is that, although the students surveyed perceive themselves to be active, independent learners, for them active, independent learning is a risky business. Therefore a supportive learning environment needs to be encouraged or, as these students suggest, they may forfeit their own preference for independence and activity in favor of academic passivity and its lower risks. This finding cannot be over emphasized in the context of this project. Faculty narrative reports and workshop presentations again and again made clear that the content of most courses, if taught in conjunction with an examination of discourse and theory in the field, provides plenty of disequilibrium and challenge for our students. We no not need to do anything extra to challenge them, our traditional content-based courses do that just fine. What has most often hindered thinking is student caution when confronted with the risks of serious learning as we present it. Therefore, if we are to encourage students to venture out into the risky world of independent, active thinking/learning we must attend carefully to how we structure their venture. A major task for the teacher in this model is to provide students with guidelines for establishing intellectual direction and control as they attempt to think their way to order in the chaos of our disciplines. Challenge, it appears, will take care of itself in content-based courses. But the support needed to meet the challenge will not be present for most students unless we who teach are careful to provide them with procedures, strategies, discourse, and theory from our field appropriate to the challenges posed them in the classroom.

The Teaching of Thinking - Intense Positive & Negative Responses

Of the seven items (9-15) which explicitly focus on the teaching of thinking, students made intense responses to 4 items (10, 11, 14, 15). Given the traditional, disciplinary, content base from which thinking is taught in this project it was heartening to find 58% of our students though the courses required them to "think about what they know." Further, students indicated

that the courses were effective in challenging them to "consider contrary facts, (51%) a major goal of faculty teaching in this project. Also, students reported that the courses required considerable integration of abstract learning into some sort of intellectual product (paper, field experience, etc.). Finally, 64% of the students surveyed indicated that courses they took did not focus on the memorization of course material. However, an examination of the five most successful courses and the five least successful courses suggests that student response to this item, however intensely felt, matters little to the actual effectiveness of the course as a course in thinking. Three of the top five courses required considerable memorization, earning responses of 83,64, and 50%. Three of the bottom five also required considerable memorization (84, 67, 59% - see **APPENDIX F** for Table Two).

Table Two is a very important data base for our study because it sorts the 26 well-taught courses into those perceived to be most and least successful by the students enrolled in them. The precentages recorded in Table Two, like those in Table One, reflect the intensity of student response to the statements made. Only statements to which 50% or more of the class gave 6 or 7 (conversely, 1 0r 2) ratings were deemed truly intense reponses to the statement. Rave responses, rather than solid affirmations, were necessary for a statement to be raised up from the study as particularly significant. Through this "rave response" factoring, the five most successful courses were separated from the 5 least successful courses.

What distinguished the most successful from the least successful courses, as courses in the teaching of thinking is:

1) the degree to which the course encourages thought about what you know (most successful courses: 92, 73, 88, 73, 68% vs. least successful courses: 1, 23, 45, 42, 25%);

2) assignments which require the students to integrate what they are learning into course papers or activities (top courses: 100, 73, 88, 73, 87 vs. bottom courses: 45, 50, 59, 21, 30).

A comparison of most and least successful courses in this study also indicates that in the most successful courses students reported with much more intensity that they were required to think about their own values, about why others think differently, and about how facts or ideas were obtained in the course than did students in the less successful courses.

Although the matter of **class size** is something of a slippery fish in this data base, it appears that class size does have some effect on courses designed to

designed to teach thinking. Of the five most successful courses, only one had an enrollment of 20 students or more (Introduction to Literature - 31). Of the five least successful courses, all had 20 or more students. The largest had 49.

Our survey does not suggest that one **field of study** lends itself better to the teaching of thinking than another. The five most successful courses included the sciences (zoology), social sciences (education - human growth and development), the fine arts (music and culture) and the humanities (composition; introduction to literature). The five least successful courses included the social sciences (economics), foreign languages (French I), professional study (accounting), and humanities (literature). Although certain skill based courses (accounting, foreign languages) may not easily be taught as courses in thinking, factors such as conscious reflection of what one knows and how one comes to know it, active integration exercises, and attention to value questions seem more important than specific disciplinary content.

Faculty Assessment of Project Activities

In the spring of 1988 project members were surveyed about their experience in the project and asked to rank order the factors which were most important to their success in the critical thinking project. 30 participants responded. The result was as follows (from most to least important - survey form and data base attached in **Appendix G**):

1. critique of syllabus by outside consultant and by colleagues (summer work groups, August meetings with Gabelnick)
2. individual reading
3. discussions of reading with colleagues (summer work groups)
4. presentations by colleagues on other ECC campuses
5. choice of course to revise
6. outside consultants
6. outside consultants

It should be noted that these items were rather evenly rated. Most notable was the extremely high rating assigned to the "critique of syllabus by

It should be noted that these items were rather evenly rated. Most notable was the extremely high rating assigned to the "critique of syllabus by colleagues and consultant" and the much lower rating of "outside consultants," meaning the speakers brought in for workshop sessions [Professor Gabelnick being the exception, participants in the project came to regard Professor Gabelnick as a wise and trusted colleague and not as a outside consultant]. From this survey it would appear that the summer work sessions in interdisciplinary groups were the heartbeat of the project. The active critique of syllabus and assignments by peers from outside one's discipline is mentioned again and again in faculty journal abstracts as a most significant faculty development and renewal experience.

Faculty Development and Renewal in the Context of the ECC Thinking Across the Curriculum Project

The assessment of this aspect of the project has been through self-reports of two sorts. First, faculty were asked to keep journals as they went through the experience of inventing, or redesigning, a traditional content-based course so that it would self-consciously foster the use of higher order reasoning skills. Second, ten faculty participants were interviewed (videotaped) at the Otterbein Workshop in October 1987. A representative selection of comments from the journal abstracts follows. Selected journal abstracts and course syllabi are included in **Appendix H**.

SELECTIONS FROM JOURNAL ABSTRACTS AND COMMENTS BY FACULTY PARTICIPANTS

- I realize that different people learn in different ways
- I realize that learning style is strongly influenced by developmental stages
- I have a heightened awareness of the various developmental levels of students and of their thinking/problem solving abilities
- I became quite conscious of various stages of cognitive development among students and of their varied learning styles; this awareness had an effect on how I made exams, approached problems in class, and dealt with students as individuals.
- The sharing of ideas with colleagues was quite valuable.
- I have an increased awareness of the importance of individual differences among my students.
- I though that I gained significantly in developing an understanding of the process of student emotional, ethical and intellectual growth. I also learned to appreciate how students differ in their approaches to learning. Most of all, through extensive discussions and interactions with fellow faculty members from a variety of schools, I leaned many new teaching approaches and strategies - a number of which have proven to be quite effective and well received by students.
- I have come to recognize students as people different from me and have

development and learning styles.

☐☐ This project forced me to think about how I present material and ideas to students and how to better tailor information and activities so that they can understand what is being requested and become more independent as learners.

☐☐ I appreciated the rich learning that came from interaction with colleagues through exchanges focused on the revision of syllabi.

☐☐ The exchange of ideas with other faculty--both at my institution and at other consortium schools--was most beneficial.

☐☐ Most important was an increased awareness of techniques for promoting the maturation of student thought processes.

☐☐ I became more sensitive to the different learning styles of students and therefore to the different problems students have in learning technical and analytical material.

☐☐ I could communicate with students better. My assignments were differentiated to fit learning styles and cognitive development stages.

☐☐ I have some overall sense that I am teaching less material but teaching it with greater impact--students are making it their own because of the room now given to central thinking skills: reading, discussing, writing, evaluating.

☐☐ I came to understand that learning to think has a strong emotional dimension; that not covering everything is OK (however, it is curious that I do cover more than I used to).

☐☐ This has been the most valuable experience relating to my profession that I have had in my 11 years of college teaching. It not only helped me to understand students, but also myself as well.

☐☐ The most important thing I learned was the very simple notion that our students need rather detailed and specific helps in order to significantly improve their intellectual processes in any given discipline.

☐☐ I came to realize that I needed to be more aware of student thought processes as they customarily occur before I could move students to higher levels of thinking.

☐☐ I now have procedures for moving students from where they are to where I want them to be.

☐☐ In several ways, I came to focus less on factual knowledge and more on the thinking process. This could be seen in the type of questions that I asked both in class and on tests. Both I and the students came to a deeper appreciation of analysis, synthesis and evaluation of material.

☐☐ I think my concentration of the Perry studies has made me more aware of where my students are in their cognitive development. I see them as individuals struggling with philosphy's challenge to their limited and rigidly absolutistic worlds (most of them are clearly dualists). I could see the confusion and frustration in their faces. So I have been inclined to encourage them with more explanation, statements to give perspective, to let them know that they are not alone in what they are experiencing and that if they persevere they will grow as a result of their confusion and frustration.

☐☐ In thinking about higher order reasoning in light of the cognitive development of the learner, I became much more sensitive to the student's world-view, [this is] I believe the most significant part of the project.

Continuation of the ECC Thinking Across the Curriculum Project

Plans for Institutionalization at Individual Colleges

Copies of plans to institutionalize the project at 5 of the 8 schools are attached in **Appendix I.** A brief summary of plans follow.

Bethany College--Bethany College will conduct a two-day workshop on the teaching of thinking across the curriculum every other year, beginning in 1990. It will be modeled after workshops designed for the FIPSE grant, required of new faculty, and available to all faculty. Also, during the summer of 1988 Bethany college, at its own expense, trained a third team of faculty members.
It has now trained 34% of its faculty in methods for the teaching of thinking across the curriculum. Faculty from the project continue to revise the courses they teach to encourage thinking across the curriculum.

Heidelberg--Like Bethany, Heidelberg has developed a workshop on critical thinking for new faculty which will be offered each year. In addition, a FIPSE funded faculty development program at Heidelberg ("The TACT Mentor Program: A Dual Introduction Into College Teaching") includes material on cognitive development and critical thinking in its college teaching seminars. Faculty from the project continue to revise the courses they teach to encourage thinking across the curriculum.

Hiram College--The teaching of thinking is being integrated into many courses as the college completes a total revision of its general education program. This extensive curriculum revision undertaking is funded by NEH.

Marietta--The teaching of thinking is being emphasized as the Freshman year course is revised. Faculty who teach these courses will be encourage to participate in critical thinking workshops to be sponsored by the Freshman Year Program as an aid to faculty development. Also, faculty who wish to offer courses in the newly established MacDonough Center for Leadership and Business will be encouraged to develop them according to critical thinking guidelines and will be offered stipends for participating in critical thinking workshops. Finally, a recently received Lilly grant for faculty development will spur further faculty participation in future critical thinking programs.

Mt. Union--With the assistance of a Quill Grant, Mt Union has begun to offer training in the teaching of thinking to all its faculy.

Muskingum--The teaching of thinking will be integrated into a new revision of the core curriculum, Liberal Arts Essentials. New faculty will be introduced to the thinking project during their orientation. Faculty will be supported to attend workshops of the teaching of thinking within and outside the ECC. Funds will be made available to computerize student learning profiles.

Otterbein--Like Bethany, Otterbein also trained a third team of faculty at its own expense during the summer of 1988. Presently there are plans to train teams four and five in 1989 and 1990. The Faculty Development committee is very supportive of the thinking project and have incorporated ideas from it into a grant proposal to the Lilly Foundation. Three members of this committee are project participants. Also, the director of Integrative Studies (core curriculum) at Otterbein is a project participant and has encouraged incorporation of key ideas from the project into new core courses.

Plans for Consortium Based Institutionalization of the Project

In addition to the plans made to keep the project alive on individual campuses, successful efforts have been undertaken to institutionalize the project at the consortium level. The consortium is responsible for completing, analyzing, and interpreting the longitudinal evaluation. This activity will insure consortium commitment to the project at least through 1993. Further, ECC director, Nancy Siferd, has assumed responsibility for developing and funding summer seminars designed to help faculty master and articulate "thinking" [method and theory] within disciplines, a key element in our plan for the teaching of thinking across the curriculum. Two grants from the National Endowment for the Humanities have already been secured to fund such seminars. The first NEH seminar was held at Princeton University during the summer of 1987. This four week seminar dealt with theory of narrative and was attended by ECC faculty in English, philosophy, history, religious studies, music, and foreign languages. NEH has funded a second seminar on issues in contemporary philosophy to be held during the summer of 1987. Like the FIPSE project, these seminars are both designed to help faculty acquire new materials and to stimulate faculty renewal. Total attendance at the two seminars will be approximately 60.

Project Dissemination: A List of Activities

Certainly much of the dissemination activity of this project was intra-college and inter-college within the ECC (newsletters, faculty forums, faculty workshops). Because the intra-college and inter-college activities took place with full institutional support at all ECC colleges 600-700 faculty members became familiar with what we were doing and were able to adapt it as they saw fit into their own teaching. Anecdotal information indicates that project faculty revised many, if not all, of the courses they teach so as to make them self-conscious forums for the teaching of thinking. Project faculty also indicate that colleagues not in the project did in fact learn from them and revise courses to reflect goals and strategies of this project. This happened most frequently in "core curriculum" courses and often with institutional support and planning.

Efforts were also made to disseminate information about the project beyond the consortium. A list of such activities follows.

Consultancies, Workshops, and Presentations (made by the project director):

- ☐☐ Association of American Colleges (January 1986) invited presentation
- ☐☐ University of Cincinnati (April 1986) Forum for Department Heads
- ☐☐ Miami University (Ohio) wkshop: (Nov. 1986) Lilly Conference of Teaching
- ☐☐ Univ. Southern Mississippi. 2 day workshop. Humanities Faculty (Oct. 1987)
- ☐☐ Univ. Southern Mississippi. 2 day workshop. Humanities Faculty(April 1988)
- ☐☐ George Mason Univ. Conf. on Non-Traditional and Interdisciplinary Learning. (paper co-authored by Grimes and Nancy Siferd--see **Appendix J**). April 1988.
- ☐☐ Phillips University. 2 day workshop. Masterworks Seminar. July 1988.
- ☐☐ Northern Texas University Conf. of Humanities. October 1988. Paper in **Appendix J**)
- ☐☐ National Conference on Intellectual Skills. Grand Rapids, MI. November 1988. Papers by Grimes and Siferd. Abstract attached in **Appendix J**.
- ☐☐ Southern Humanities Conference, Feb. 1989. See article in **Appendix J**.

Networking with Colleagues and with Funding Organizations

- ☐☐ send material on request to 50-60 colleges and high schools.
- ☐☐ Alverno College Workshop on Critical Thinking (Project Director, Grimes invited participant) June 1986.
- ☐☐ presentation by ECC Director, Nancy Siferd, Council for Interinstitutional Leadership, Boston. October 1987.
- ☐☐ presentation by Siferd and Project Consultant, Faith Gabelnick, Northeast Region Directors of Honors Colleges Workshop. University of Rhode Island. April 1988.
- ☐☐ Workshops in Humanistic Narrative. 2 four-week workshops for 16 faculty each. Funded by NEH. Princeton. June-July 1987.
- ☐☐ The TACT-Mentor Program: A Dual Introduction Into College Teaching.

Funded by FIPSE beginning fall 1988. Heidelberg College.

☐☐ Quill Grant from CIC for Workshop of Critical Thinking. Mt. Union. Fall 1987.

☐☐ "Epistemology and the Liberal Arts." a 6 week workshop to be held at Western Michigan University, summer of 1990. Funded by NEH.

☐☐ "Tools for Scientific Thinking Project." Robert Tease of Muskingum College, project participant. Funded by FIPSE. Grant # DTD 060986.

Newsletters and other publications:

☐☐ Attached in **Appendix K** are two newsletters indicative of general newsletter coverage of the Project.

☐☐ A special newsletter which will include the summary of this report, sample assignments, some evaluation data, etc. is in preparation and will be submitted under separate cover.

☐☐ Articles for a monograph have been solicited and collected--search for a publisher is in progress.

☐☐ Videotapes will be made available at cost on request.

APPENDIX A

□□ job description - faculty participants
□□ job description - campus coordinators

TASK DESCRIPTION
FOR FACULTY MEMBERS
ON WORKSHOP/STUDY/COURSE REVISION TEAMS

1. undertake and complete all assignments preparatory to workshops (readings, activities, group discussions)

2. attend and actively participate in all workshops (2-day workshop, **May 25,26**; consultant visit on either **August 6 or 7**; 1-day workshop, **September 27**, and one day workshop to be scheduled in Spring 1987)

3. spend 4 weeks during the summer studying developmental theory and methods for teaching higher order reasoning

4. in light of your study, revise a course that you normally teach so as to make sure that it helps students develop and improve higher order reasoning/critical thinking skills

5. meet with our consultant during August to review your syllabus and to ask questions relevant to your course revision project

6. implement the revised course in Fall Term

7. participate in the FIPSE evaluation project (attend follow-up workshops as noted above, administer tests to your class, share data with the ECCC/PIPSE project)

8. assist your Project Coordinator as he/she works to institutionalize this project on your campus

TASK DESCRIPTION FOR
CAMPUS COORDINATORS OF FIPSE SPONSORED
ECCC CRITICAL THINKING PROJECT
7 DECEMBER 1985

1. serve as laison between the Project Director and the various campuses

2. serve as advisory board to the Project Director (helping with on-going evaluation, calendar and scheduling, grant revision and extension, etc.)

3. translate and interpret the project and its primary goals to your campus, especially to those faculty who will participate actively in the project

4. work with your Dean to make sure that faculty are recruited to participate in workshops and study/course revision project **(8 to begin in the summer of 1986, 7 more in the summer of 1987)** - a list of faculty workshop/study/course revision teams should be sent by Campus Coordinators to the Project Director **on or before 1 February of each year**

5. prepare faculty workshop/study/course revision teams on your campus for active participation in the spring/summer workshop (distribute bibliography, readings, assignments--hold small group discussion sessions of materials distributed in advance of the workshop, etc.)

6. coordinate the summer study/course revision activity on your campus during the summers of 1986 and 1987 (assist individual faculty, arrange group study sessions and sessions to review syllabus revision, etc.); special efforts will need to be made in 1987 to insure that the 1987 team learns from the 1986 team

7. be a member of the 1986 study/course revision team from your campus and revise a course to be taught in 1986

8. attend all project workshops

9. encourage your campus library and media center to acquire resource material related to the project

10. suggest and devise activities on your campus complementary to the FIPSE project

11. suggest and help implement ECCC activities complementary to the FIPSE project

12. coordinate evaluation activities on your campus

13. spearhead the institutionalization of the project on your campus

APPENDIX B

- evaluation plans (longitudinal and student/faculty perception studies

- assessment instruments used for the longitudinal study

Form A

WATSON-GLASER

CRITICAL THINKING APPRAISAL

DIRECTIONS

This booklet contains five types of tests designed to find out how well you are able to reason analytically and logically. *Each test has separate directions that should be read carefully.*

Do not turn this page until instructed to do so.

Do not make any marks in this test booklet.

All answers are to be marked on the separate answer sheet provided. Use a sharp No. 2 lead pencil to mark your answers. If you wish to change an answer, be sure to erase your old answer completely.

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Test #2 Recognition of Assumptions
Test #3 Deduction
Test #4 Interpretation
Test #5 Evaluation of Arguments

TEST 1: INFERENCE

DIRECTIONS

An inference is a conclusion a person can draw from certain observed or supposed facts. For example, if the lights are on in a house and music can be heard coming from the house, a person might infer that someone is at home. But this inference may or may not be correct. Possibly the people in the house did not turn the lights and the radio off when they left the house.

In this test, each exercise begins with a statement of facts that you are to regard as true. After each statement of facts you will find several possible inferences—that is, conclusions that some persons might draw from the stated facts. Examine each inference separately, and make a decision as to its *degree* of truth or falsity.

For each inference you will find spaces on the answer sheet labeled T, PT, ID, PF, and F. For each inference make a mark on the answer sheet under the appropriate heading as follows:

EXAMPLE

Two hundred students in their early teens voluntarily attended a recent weekend student conference in a Midwestern city. At this conference, the topics of race relations and means of achieving lasting world peace were discussed, since these were the problems the students selected as being most vital in today's world.

Test 1

	T	PT	ID	PF	F
1		■			
2				■	
3			■		
4					■
5	■				

1. As a group, the students who attended this conference showed a keener interest in broad social problems than do most other students in their early teens.
2. The majority of the students had not previously discussed the conference topics in their schools.
3. The students came from all sections of the country.
4. The students discussed mainly labor relations problems.
5. Some teenage students felt it worthwhile to discuss problems of race relations and ways of achieving world peace.

T if you think the inference is definitely TRUE; that it properly follows beyond a reasonable doubt from the statement of facts given.

PT if, in the light of the facts given, you think the inference is PROBABLY TRUE; that it is more likely to be true than false.

ID if you decide that there are INSUFFICIENT DATA; that you cannot tell from the facts given whether the inference is likely to be true or false; if the facts provide no basis for judging one way or the other.

PF if, in the light of the facts given, you think the inference is PROBABLY FALSE; that it is more likely to be false than true.

F if you think the inference is definitely FALSE; that it is wrong, either because it misinterprets the facts given, or because it contradicts the facts or necessary inferences from those facts.

Sometimes, in deciding whether an inference is probably true or probably false, you will have to use certain commonly accepted knowledge or information that practically every person has. This will be illustrated in the example that follows.

Look at the example in the next column; the correct answers are indicated in the block at the right.

In the above example, inference 1 is probably true (PT) because (as is common knowledge) most people in their early teens do not show so much serious concern with broad social problems. It cannot be considered definitely true from the facts given because these facts do not tell *how much* concern other young teenagers may have. It is also possible that some of the students volunteered to attend mainly because they wanted a weekend outing.

Inference 2 is probably false (PF) because the students' growing awareness of these topics probably stemmed at least in part from discussions with teachers and classmates.

There is no evidence for inference 3. Thus there are insufficient data (ID) for making a judgment on the matter.

Inference 4 is definitely false (F) because it is given in the statement of facts that the topics of race relations and means of achieving world peace were the problems chosen for discussion.

Inference 5 necessarily follows from the given facts; it therefore is true (T).

In the exercises that follow, more than one of the inferences from a given statement of facts may be true (T), or false (F), or probably true (PT), or probably false (PF), or have insufficient data (ID) to warrant any conclusion. Thus you are to judge each inference independently.

Make a heavy black mark in the space under the heading that you think best describes each inference. If you change an answer, erase it thoroughly. Make no extra marks on the answer sheet.

Go on to the next page ▶

BEST COPY AVAILABLE

MEASURE OF INTELLECTUAL DEVELOPMENT

The attached essay/s deal with how you as an individual think about certain issues. There are no right or wrong responses; what is important is that you present as clearly as you can the way you think about the issue.

Before responding to the essay/s, please provide us with the basic information below. Such information is helpful in identifying differences among groups of people and will be held in strict confidence. **At no time will it be used to identify you as an individual**, although your code number or social security number may be used to facilitate a follow-up contact with you in the future.

NAME(**OPTIONAL**)_____ DATE_____

SOCIAL SECURITY NUMBER
(or STUDENT CODE NUMBER)_____

SEX: FEMALE___ MALE___ AGE_____ RACE_____

MAJOR(If UNDECIDED, SO STATE)_____

CLASSIFICATION(check one)

Freshman_____ Junior_____ Grad Student_____
Sophomore_____ Senior_____ Other_____

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Carole C. Yidiek & L. Lee Knefelkamp
1985, Center for Applications of Developmental Instruction
Farmville, Virginia
William S. Moore, Coordinator

ESSAY AP **Student Code Number**_____

Describe a class that would represent the ideal learning environment for you. Please be as specific and concrete as possible about what this class would include; we want you to go into as much detail as you think is necessary to describe clearly this ideal class. For example, you might want to discuss what the content or subject matter would be, the evaluation procedures that would be used, the demands on you as a student, what the teacher/s would be like, and so on. Please include your explanations for why your description is "ideal" for you.

RECOMMENDATIONS FOR EVALUATION

IN THE

EAST CENTRAL COLLEGE CONSORTIUM

FIPSE CRITICAL THINKING PROJECT

Glen Rogers
Office of Research and Evaluation
Alverno College

June 5, 1986

Appendix A

Core Project-Wide Measures for the Longitudinal Outcome Study

The Critical Thinking Appraisal fulfills the interest expressed by project members in a nationally normed measure of critical thinking. Moreover, this measure corresponds well to the basic abilities included in the project participants' definitions of critical thinking. I believe it has a higher content validity for a liberal arts Faculty relative to the Cornell Critical Thinking Test. Unlike the Cornell, the Critical Thinking Appraisal has identified some subscales, which may make the analyses more meaningful. I recommend an open-ended written mode of measurement for Perry, because the project wide reliance upon interview data would be too costly, while reliance on an a close-ended preference task, which would be only weakly validated, would yield data unreflective of the potential of the students to reason for themselves at a Perry stage.

I am still investigating the characteristics of two divergent options for measuring Perry in a written mode. The training time for raters would be relatively feasible for those already familiar with the Perry system:

(1) The Measure of Epistemological Reflection (MER), which utilizes a short answer format, may require as much as 70 to 90 minutes to administer. Although the philosophy behind its measurement is fetching, the MER has a shorter history of use. The authors offer a rater training service that is essentially free of charge. One issue that has arisen is the negotiation of agreements to the contractual rights to the data, as the permission to use the MER may involve inextricably giving up some rights to the data. Marcia Baxter-Magolda, one of the authors of the MER, feels she is able to score protocols at a rate that is equivalent to eight individuals per hour.

(2) The Measure of Vocational, Educational, and Personal Issues (MVEPI), also widely known as the Measure of Intellectual Development (MID), may require 45 to 50 minutes to administer, if participants are asked to complete essays A, B, and C. At least one other stimulus essay exists. I am still discussing the best mix of stimulus essays for MID scoring. Bill Moore at Longwood College in Farmville, Virginia, reports that their service will score MID essays at $4 each. Alternatively, Bill Moore, for a consulting fee of probably less than $1000 (not including expenses for three trips), is available for training raters in the MID. Although the Mentkowski, Moeser, and Strait (1983) two-volume publication on Perry has yet to be systematically evaluated for its rater training capabilities, these volumes offer still another alternative for gaining expertise in rating the MID. The well trained rater might average 10 minutes for scoring an essay. The process of reaching inter-rater consensus would take a few minutes more. Permission by one of the authors to use the MID stimulus essays is required. Although rights to the data may again be an issue, they so far appear less severe than with the MER,

having to do with protecting the rater service or establishing norms. As one alternative to possible restrictions on the use of the MID, we could explore the possibility of creating our own unique set of stimulus essays based upon Perry's work. One disadvantage to this strategy is that norms are accumulating on the MID.

Reports of inter-rater reliability for both the MID and MER appear acceptable. The complexity of the scoring systems defies an easy summary of these figures, but inter-rater correlations of .70 and .80, respectively, are reasonable representations of the reliability of the scoring.

It should be pointed out that both the MER and MID are generally felt to be less adequate at measuring Perry stages of reasoning when compared to a systematic interview format, where probe questions can be used to identify reasoning structures. Karen Kitchener and Patricia King have developed and validated their Reflective Judgment Interview to the point that it is the standard for the field. Inter-rater reliability has been reported as high as .96 in one study and as low as .51 in another (see Mines, 1982). Individual colleges should consider buttressing their contribution to the proposed longitudinal study with such an interview, but, of course, it cannot be administered in a group setting. Patricia King suggests that the reliability of the interview may be such that a 15 minute dilemma discussion may be sufficient for accurate scoring.

Finally, it must be also acknowledged that the epistemological and ethical development model of Perry is still being developed, especially in regard to the upper levels of development. Divergent characterizations of the upper levels of development remain, but research suggests that an undergraduate population will be at lower stages of development. Although the validity of the essay measurement strategies, which are the most efficient and which offer the best chance of standardization of administration across the project, will remain a discussible point, the MID has been correlated with interview measures, $r = 74$ and .76, which is a substantial indication of its validity as a measurement strategy.

The project evaluation would be strengthened if an effective measure of content knowledge in the major discipline was available for implementing as a baseline measure. Such a measure would address the concerns of some project participants that focusing on abilities may limit the coverage of content. The effective design of such a set of disciplinary content measures will present many difficulties and the need to implement it as a baseline measure is immediate. Therefore, project participants will need to quickly decide whether they will want to commit to this instrument development task.

Alverno College

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Larry Grimes
Professor of English
and Director of ECC/FIPSE
Thinking Across the Curriculum Project
Bethany College
Bethany, West Virginia

September 8, 1988

Dear Larry,

I am thinking a few written words might be of some help to you. The selection of the narratives for inclusion in the project might include a number of different selection criteria. You might consider the following criteria a jumping off place for your thinking and discussions about the narrative selection:

Narrative Selection Criteria

- o Compelling Narratives. This would include narratives that recount compelling early successes and narratives that recount compelling adjustments and later successes. The determination of the successfulness would be judged by the panel of judges who evaluate the compellingness of the narration.

- o Inclusion of Relevant Data. This data could be either quantitative or qualitative. In many ways this criteria overlaps with the above. The first-party account of the instructor is one form of data that may be more or less compelling. Data or accounts of student perceptions and outcomes could also be more or less compelling.

- o Characterization of Problem Areas. This criteria is the mirror image of the criteria of successful implementation considered under compelling narratives. Because inclusion of problems is less obvious than inclusion of exemplars of success I will elaborate a little more. Inclusion of some narratives that represent the range of experiences on the project would have several benefits that may be considered as sub-criteria. (1) Inclusion: The experience of legitimate efforts that did not bear fruit would give all project members a sense of inclusion. (2) Accuracy: The representation of the range of project experiences would give a fuller depiction of the project. (3) Realism: The representation of less successful attempts would give a sense of realism to the set of narratives as a whole, and provide a ground for comparison of successful and less successful experiences. (4) Areas For Improvement: This sub-criteria is a central reason for giving a range of experiences. There may be lessons to be learned from less successful interventions. Such narratives may suggest

alternative strategies by identifying important problem areas in implementation that could be avoided or resolved.

Rating of Narratives For Correlation With Student Perceptions

The primary purpose for collecting data on student perceptions of the courses taught by project members is to validate the narratives from another source that is independent of the narrative. If the narratives are valid and generalizable accounts of outcomes, it would be expected that compelling accounts of success in the narratives would be associated with student perceptions of critical thinking interventions and outcomes in the instructors subsequent teaching of lhe course. In order to make this relationship between narratives and student perceptions as efficiently as possible, it makes sense to rate the narratives on relevant criteria as part of the process of selecting narratives.

Rating of the narratives implies some consensus on the use of the rating scales and definitions of criteria. This implies consensus discussions among raters/selectors. A small sub-group might develop the criteria and their application out of consensus discussions following independent rating. The product would be consensus criteria and a plan for bringing in and training other raters. The process could also begin with all of the raters involved, if logistics and resources permit. In fact, as I think about it, the selection process ties in best with this process of developing criteria and their application. The actual rating for purposes of correlation would, then, be carried out by two individuals who had participated in the criteria/selection process.

One counter-argument to interpreting a correlation between student perceptions and instructor narratives as indicative of a project related effect is that such a correlation might simply reflect pre-existing instructor differences. In other words, the instructors who were already the best teachers might write the best narratives and, then, as usual, be rated high by students. Fortunately, the narratives themselves provide accounts of project effects. This suggests that for the purpose of demonstrating the effect of the project via narrative/perception correlations, the panel of judges should quantitatively rate the degree to which the narrative shows the impact of the project on the instructor/course. One remaining refuge for the skeptic of the impact of the project would be that those who are <u>likely to change</u> as a result of projects are the best teachers who, as usual, get the best ratings. I don't know how this could ever be headed off, but this refuge, at least, invites the skeptic to be a changer.

Highest Regards,

Glen Rogers, PhD
Research Associate
Office of Research
and Evaluation

ADDENDUM

Project vs. Non-Project Participation Comparisons

With regard to the fielding of a project wide student perceptions instrument, project versus non-project comparisons seem intractably problematic. Again, the differences in student ratings of project and non-project members may be based upon differences that exist independent of project impact. This is because better teachers may have been chosen by deans to participate or volunteered to participate.

The pre-existing differences between instructors who have and have not participated in the project cannot be separated from project impact when you do not have have the narratives from non-project participants. (Within project comparisons can deal with this problem I believe. Recall that rating the narratives for degree of project impact was an avenue for showing differential project impact within project participants. I expect that the narratives across instructors will contain better evidence for project impact in some courses relative to others, as well as showing raw differences in quality of outcomes and instruction within the courses. Together, each of these differences supports the within project comparison to the student ratings.)

There may be another strategy, however, that would support comparisons between project participants and non-participants. You might be able to compare evaluations of instructors on existing course evaluation forms at each campus. In this manner, it would be shown that project participation is associated with improved student perceptions independent of pre-existing differences between instructors. Of course, this presumes that the evaluation forms are sensitive to critical thinking activities and outcomes in courses. Some may argue that the course evaluation were not sensitive to critical thinking course interventions. There is the advantage that a broad measure might be a better indicator of the range of outcomes in the course. So, existing course evaluations might head off concerns of foregone benefits in the wake of the critical thinking intiatives. Changes in the forms across the campus during the project could be another obstacle, however.

Another concern arising from the comparison of project and non-project participant participants is that non-project participants may find it invidious no matter how its done. This would work against your goal of including them in the project. I expect skeptics would not accept an interpretation of an data analysis that they have not been participants in designing and, so, non-participating skeptics are a rough audience to convince with imperfect data. I do feel, however, that the narratives may increase interest in joining the thinking across the curriculum effort, even for skeptics. Through their narratives, I think the project participants can be the ambassadors of the project, and correlating student perceptions with their perceptions would help give them the authority they need to make their case.

The central point of this digression is that the appropriate comparison for showing project impact is changes through time that are associated with project participation. This is as true for the

perception data as for other data. These changes through time could be associated with time of project participation, or with project versus non-project participation. I feel, comparison between project and non-project participants at a single point in time would likely raise for the project, however, the thorny topic of pre-existing differences without helping to answer it. In contrast, the narratives are themselves embedded descriptions of changes through time.

Attachment: Letter to John Hull.

APPENDIX C

- list of project participants, alphebetical
- list of project participants, by field of specialization

	1	2	3	4
1	•Bethany College	Bethany, WV	26032	304-829-7000
2	•Heidelberg College	Tiffin, Ohio	44883	419-448-2000
3	•Hiram College	Hiram, Ohio	44234	
4	•Marietta College	Marietta, Ohio	45750	614-373-4643
5	•Mount Union College	Alliance, Ohio	44601	216-821-5320
6	•Muskingum College	New Concord, Ohio	43762	
7	•Otterbein College	Westerville, Ohio	43081	
8	•Westminster College	New Wilmington, PA	16172	412-946-8761
9	Adkins, Lynn	Sociology & Social Work	Bethany	304-829-4215
10	Aker, Ugur	Economics and Mgt.	Hiram	216-569-5142
11	Anderson, E. Robert	Computer Science	Marietta	
12	Anderson, Sigrid	German	Hiram	216-569-5151
13	Bailey, James	English	Otterbein	614-898-1160
14	Barclauskas, Jonas	Library/Religion	Bethany	304-829-7334
15	Barkhymer, Lyle	Music	Otterbein	614-898-1210
16	Beaver, Jerry	Religion	Muskingum	
17	Becker, Mimi	Environmental Studies	Hiram	216-569-5365
18	Bernstein, Barbara	Computer Science	Marietta	
19	Blenz, John	English	Mount Union	
20	Bing, John	Pol. Science & Sociology	Heidelberg	419-448-2067
21	Blume, Steven	English	Marietta	614-374-4639
22	Boyer, David	Sociology	Marietta	
23	Buckey, Donald	Religion & Philosophy	Mount Union	216-821-5320
24	Burk, Robert	History	Muskingum	
25	Caldrone, Maria	Equine Science	Otterbein	614-898-1102
26	Chaffee, Alan	English	Muskingum	
27	Cole, Robyn	English	Bethany	304-829-7927
28	Coney, W. Randolph	Economics and Business	Bethany	304-829-7451
29	Coram, Katherine	Sociology & Social Work	Bethany	304-829-7553
30	Cox, Larry	Psychology	Otterbein	614-898-1515
31	Cress, David	Petroleum Engineering	Marietta	
32	Cummins, Ray	Geology	Muskingum	
33	Daugherty, Beth	English	Otterbein	614-898-1659
34	Davis, John D.	Economics and Business	Bethany	304-829-7888
35	Davis, John U.	Education	Bethany	304-829-7172
36	Donley, Carol	English	Hiram	216-569-5325
37	Drubel, Charles	Business	Muskingum	
38	Dutson, Richard	History	Mount Union	
39	Fawley, J. Philip	Biology	Westminster	

	1	2	3	4
40	Feather, Kathy	Education	Hiram	216-569-5365
41	Fischer, Gwen	Psychology	Hiram	216-569-5265
42	Fors, Bonnie	History	Heidelberg	419-448-2172
43	Frary, Paul	Economics & Business	Westminster	
44	Gerlach, Rudy	Chemistry	Muskingum	
45	Gittis, Alan	Psychology	Westminster	
46	Goldin, Edwin	Physics	Bethany	304-829-7732
47	Gorce, John	Chemistry	Heidelberg	419-448-2015
48	Grimes, Larry	English	Bethany	304-829-7921
49	Guthrie, David	Theater	Westminster	
50	Hinton, John	Mathematics	Otterbein	614-898-1459
51	Hahn, Jeffery	Sociology	Mount Union	
52	Hancock, G. Whitmore	Physics	Marietta	
53	Hanson, Robin	Library	Muskingum	
54	Hartel, William	History	Marietta	
55	Hassenpflug, Earl	Art	Otterbein	614-898-1500
56	Hendel, Douglas	Speech and Drama	Mount Union	
57	Herschler, Michael	Life/Equine Science	Otterbein	614-898-1119
58	Hill, Mary	Education	Westminster	
59	Hils, Matt	Biology	Hiram	216-569-5272
60	Hohman, William	Chemistry	Marietta	
61	Horn, Frederick	English	Westminster	
62	Horning, Martin	Economics	Mount Union	
63	Huehner, Marty	Biology	Hiram	216-569-5266
64	Johnston, Allen	Education	Westminster	
65	Jones, Brian	Econ./Business Admin.	Otterbein	614-898-1362
66	Judy, David	English/Theatre	Bethany	304-829-7117
67	Kirklin, Wayne	Bus. Admin. & Economics	Heidelberg	419-448-2036
68	Kitzerow, Phyllis	Sociology	Westminster	
69	Klopp, Susan	English LanguageProgram	Otterbein	614-898-1162
70	Knight, Rae	Psychology	Hiram	
71	Kramer, Stephen	Psychology	Mount Union	
72	Kresse, Doug	Comm. and Theatre Arts	Heidelberg	419-448-2005
73	Lilly, Gary	Sociology	Westminster	
74	Lamb, Patricia	English	Westminster	
75	Lammel, Earl	Theatre	Westminster	
76	Lester, Hiram	Religious Studies	Bethany	304-829-7941
77	Long, Kenneth	Chemistry	Westminster	
78	MacHaffie, Frazier	Economics	Marietta	

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79	Macky, Peter	Religion and Philosophy	[illegible]	
80	Malone, Gloria	English	Mount Union	
81	Mann, Jese	French	Westminster	
82	Marshall, Denise	English	Heidelberg	419-448-2218
83	Matthews, Patricia	Economics/ Bus. Admin.	Mount Union	
84	McMahon, Katherine	English	Mount Union	
85	Mitch, Anthony	English	Bethany	304-829-7924
86	Moeller, Robert	Theatre	Hiram	216-569-5218
87	Moss, David	Chemistry	Hiram	
88	Murdoch, Arthur	Chemistry	Mount Union	
89	Murray, Bob	Biology	Heidelberg	419-448-2046
90	Murray, Mary Jo	History	Heidelberg	419-448-2311
91	Myers, Robert	Philosophy	Bethany	304-829-7121
92	Naour, Paul	Education	Muskingum	
93	Normansell, Larry	Psychology	Muskingum	
94	Oliver, Skip	Political Science	Heidelberg	419-448-2219
95	Peng, Steve	Economics	Muskingum	614-826-8203
96	Phelps, Lewis	Music	Mount Union	
97	Pierce, Linda	Communications	Hiram	
98	Pridgeon, Charles	English	Marietta	
99	Prindle, Alison	English	Otterbein	614-898-1321
100	Ragosin, David	English	Mount Union	
101	Recob, James	Religion & Philosophy	Otterbein	614-898-1561
102	Reyer, William	English	Heidelberg	419-448-2174
103	Rittenhouse, Wayne	Reading Specialist	Otterbein	614-898-1362
104	Schroeder, Susan	Art	Hiram	
105	Schultz, Marilyn	Education	Heidelberg	419-448-2134
106	Schultz, William	English	Muskingum	
107	Schwartz, Stephen	Freshman Year Program	Marietta	
108	Scinicariello, Sharon	French	Muskingum	
109	Segreto, Joyce	Psychology	Muskingum	
110	Sharkey, Gene	History	Westminster	412-946-7246
111	Shaver, Harold	Communications	Bethany	304-829-7716
112	Sheppard, William	Communications	Marietta	
113	Siferd, Nancy	English, Exec. Dir. ECC	Heidelberg	419-448-2047
114	Stanahan, Brainard	English	Hiram	
115	Staude, Mitch	Religion & Philosophy	Otterbein	614-898-1661
116	Steinhagen, Carol	English	Marietta	
117	Stone, Nancy	Education	Heidelberg	419-448-2130
118				
119	Strayer, Judy	Nursing	Otterbein	614-898-1614
120	Taylor, Dennis	Biology	Hiram	216-569-5267
121	Teese, Robert	Physics	Muskingum	
122	Thomas, George	Religion & Philosophy	Mount Union	
123	Thompson, T. Gale	Psychology	Bethany	304-829-7436
124	Voner, Fred	Geology	Marietta	
125	Wahlstrom, Ruth	English	Heidelberg	419-448-2100
126	Walther, William	Biology	Marietta	
127	Zabor, Steve	Economics and Mgt.	Hiram	216-569-5141
128	Zumbar, Angela	Spanish	Mount Union	
129				
130				

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	1	2	3	4
1	*Mount Union College	Alliance, Ohio	44601	216-821-5320
2	Hassenpflug, Earl	Art	Otterbein	614-898-1500
3	Schroeder, Susan	Art	Hiram	
4	*Bethany College	Bethany, WV	26032	304-829-7000
5	Fawley, J. Philip	Biology	Westminster	
6	Hills, Matt	Biology	Hiram	216-569-5272
7	Huehner, Marty	Biology	Hiram	216-569-5266
8	Murray, Bob	Biology	Heidelberg	419-448-2046
9	Taylor, Dennis	Biology	Hiram	216-569-5267
10	Walther, William	Biology	Marietta	
11	Kirklin, Wayne	Bus. Admin. & Economics	Heidelberg	419-448-2036
12	Drubel, Charles	Business	Muskingum	
13	Gerlach, Rudy	Chemistry	Muskingum	
14	Gorce, John	Chemistry	Heidelberg	419-448-2015
15	Hohman, William	Chemistry	Marietta	
16	Long, Kenneth	Chemistry	Westminster	
17	Moss, David	Chemistry	Hiram	
18	Murdoch, Arthur	Chemistry	Mount Union	
19	Kresse, Doug	Comm. and Theatre Arts	Heidelberg	419-448-2005
20	Pierce, Linda	Communications	Hiram	
21	Shaver, Harold	Communications	Bethany	304-829-7716
22	Sheppard, William	Communications	Marietta	
23	Anderson, E. Robert	Computer Science	Marietta	
24	Bernstein, Barbara	Computer Science	Marietta	
25	Jones, Brian	Econ./Business Admin.	Otterbein	614-898-1362
26	Horning, Martin	Economics	Mount Union	
27	MacHaffie, Frazier	Economics	Marietta	
28	Peng, Steve	Economics	Muskingum	614-826-8203
29	Frary, Paul	Economics & Business	Westminster	
30	Cooey, W. Randolph	Economics and Business	Bethany	304-829-7451
31	Davis, John D.	Economics and Business	Bethany	304-829-7888
32	Aker, Ugur	Economics and Mgt.	Hiram	216-569-5142
33	Zabor, Steve	Economics and Mgt.	Hiram	216-569-5141
34	Matthews, Patricia	Economics/ Bus. Admin.	Mount Union	
35	Davis, John U.	Education	Bethany	304-829-7172
36	Feather, Kathy	Education	Hiram	216-569-5365
37	Hill, Mary	Education	Westminster	
38	Johnston, Allen	Education	Westminster	
39	Naour, Paul	Education	Muskingum	

	1	2	3	4
40	Schultz, Marilyn	Education	Heidelberg	419-448-2134
41	Stone, Nancy	Education	Heidelberg	419-448-2130
42	Bailey, James	English	Otterbein	614-898-1160
43	Bienz, John	English	Mount Union	
44	Blume, Steven	English	Marietta	614-374-4639
45	Chaffee, Alan	English	Muskingum	
46	Cole, Robyn	English	Bethany	304-829-7927
47	Daugherty, Beth	English	Otterbein	614-898-1659
48	Donley, Carol	English	Hiram	216-569-5325
49	Grimes, Larry	English	Bethany	304-829-7921
50	Horn, Frederick	English	Westminster	
51	Lamb, Patricia	English	Westminster	
52	Malone, Gloria	English	Mount Union	
53	Marshall, Denise	English	Heidelberg	419-448-2218
54	McMahon, Katherine	English	Mount Union	
55	Mitch, Anthony	English	Bethany	304-829-7924
56	Pridgeon, Charles	English	Marietta	
57	Prindle, Alison	English	Otterbein	614-898-1321
58	Ragosin, David	English	Mount Union	
59	Reyer, William	English	Heidelberg	419-448-2174
60	Schultz, William	English	Muskingum	
61	Stanahan, Brainard	English	Hiram	
62	Steinhagen, Carol	English	Marietta	
63	Wahlstrom, Ruth	English	Heidelberg	419-448-2100
64	Klopp, Susan	English LanguageProgram	Otterbein	614-898-1162
65	Siford, Nancy	English, Exec. Dir. ECC	Heidelberg	419-448-2047
66	Judy, David	English/Theatre	Bethany	304-829-7117
67	Becker, Mimi	Environmental Studies	Hiram	216-569-5365
68	Caldrone, Maria	Equine Science	Otterbein	614-898-1102
69	Mann, Jese	French	Westminster	
70	Scinicariello, Sharon	French	Muskingum	
71	Schwartz, Stephen	Freshman Year Program	Marietta	
72	Cummins, Ray	Geology	Muskingum	
73	Voner, Fred	Geology	Marietta	
74	Anderson, Sigrid	German	Hiram	216-569-5151
75	*Hiram College	Hiram, Ohio	44234	
76	Burk, Robert	History	Muskingum	
77	Dutson, Richard	History	Mount Union	
78	Fors, Bonnie	History	Heidelberg	419-448-2172

	1	2	3	4
79	Hartel, William	History	Marietta	
80	Murray, Mary Jo	History	Heidelberg	419-448-2311
81	Sharkey, Gene	History	Westminster	412-946-7246
82	Hanson, Robin	Library	Muskingum	
83	Barclauskas, Jonas	Library/Religion	Bethany	304-829-7334
84	Herschler, Michael	Life/Equine Science	Otterbein	614-898-1119
85	•Marietta College	Marietta, Ohio	45750	614-373-4643
86	Hinton, John	Mathematics	Otterbein	614-898-1459
87	Barkhymer, Lyle	Music	Otterbein	614-898-1210
88	Phelps, Lewis	Music	Mount Union	
89	•Muskingum College	New Concord, Ohio	43762	
90	•Westminster College	New Wilmington, PA	16172	412-946-8761
91	Strayer, Judy	Nursing	Otterbein	614-898-1614
92	Cress, David	Petroleum Engineering	Marietta	
93	Myers, Robert	Philosophy	Bethany	304-829-7121
94	Goldin, Edwin	Physics	Bethany	304-829-7732
95	Hancock, G. Whitmore	Physics	Marietta	
96	Teese, Robert	Physics	Muskingum	
97	Bing, John	Pol. Science & Sociology	Heidelberg	419-448-2067
98	Oliver, Skip	Political Science	Heidelberg	419-448-2219
99	Straley, Stacia	Political Science	Muskingum	
100	Cox, Larry	Psychology	Otterbein	614-898-1515
101	Fischer, Gwen	Psychology	Hiram	216-569-5265
102	Gittis, Alan	Psychology	Westminster	
103	Knight, Rae	Psychology	Hiram	
104	Kramer, Stephen	Psychology	Mount Union	
105	Normansell, Larry	Psychology	Muskingum	
106	Segreto, Joyce	Psychology	Muskingum	
107	Thompson, T. Gale	Psychology	Bethany	304-829-7436
108	Rittenhouse, Wayne	Reading Specialist	Otterbein	614-898-1362
109	Beaver, Jerry	Religion	Muskingum	
110	Buckey, Donald	Religion & Philosophy	Mount Union	216-821-5320
111	Recob, James	Religion & Philosophy	Otterbein	614-898-1561
112	Staude, Mitch	Religion & Philosophy	Otterbein	614-898-1661
113	Thomas, George	Religion & Philosophy	Mount Union	
114	Macky, Peter	Religion and Philosophy	Westminster	
115	Lester, Hiram	Religious Studies	Bethan,	304-829-7941
116	Boyer, David	Sociology	Marietta	
117	Hahn, Jeffery	Sociology	Mount Union	

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118	Kitzerow, Phyllis	Sociology	Westminster	
119	Lilly, Gary	Sociology	Westminster	
120	Adkins, Lynn	Sociology & Social Work	Bethany	304-829-4215
121	Coram, Katherine	Sociology & Social Work	Bethany	304-829-7553
122	Zumbar, Angela	Spanish	Mount Union	
123	Hendal, Douglas	Speech and Drama	Mount Union	
124	Guthrie, David	Theater	Westminster	
125	Lammel, Earl	Theatre	Westminster	
126	Moeller, Robert	Theatre	Hiram	216-569-5218
127	•Heidelberg College	Tiffin, Ohio	44883	419-448-2000
128	•Otterbein College	Westerville, Ohio	43081	
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APPENDIX D

□□ written summary evaluations of project, Year I
--Marietta College
--Mount Union College
--Westminster College

□□ representative sample of journal abstracts, Year I
--Steve Kramer (Abnormal Psych.)
--George Thomas (Intro. to Philosophy)
--John Benz (Advanced Writing, syllubus included)
--Katherine Coram (Intro. to Social Work Practice)
--Phyllis Kitzerow (Criminology)

WESTMINSTER
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Co-ordinator's Summary Statement for
First Year of FIPSE Critical Thinking Project

Both as co-ordinator of the Westminster effort and as a faculty member participating in that effort, I have found the year of work to be very productive in the enhancement and refinement of my approach to the teaching of critical thinking.

I am an historian and the course with which I chose to experiment was the Social and Intellectual History of the United States. The choice was prompted by two considerations: first, it is a course which, by inherent definition, cannot be of real benefit to students unless they are capable of thinking with critical understanding. Second, it is the course with which I am most confident that I have achieved success in the encouragement of critical thinking by students during the years in which it has been offered.

Because the course is the one to which I have most intensively applied critical thinking techniques, I found that, as prepared for Fall Term, 1986, I did not include any new procedures or resources directly derivative of the present project. However, I did substantially modify much of my existing method of course presentation in accordance with techniques which have been demonstrated to encourage critical thinking.

Areas in which I believe that the project enhanced the course include evaluation of student abilities of critical thought and preparation of more precise and more useful syllabi.

Perhaps as valuable as any other aspect of my experience was the opportunity to learn from and share with others--within Westminster and across the East Central Consortium.

It is too soon to make effective judgments about the success of the project beyond the presently evident and very favorable beginning. I detected no difference in student performance during the past term although the course was very successful based upon student response. For all of us, judgment must await long-term tracking of student development. Similarly, it will be instructive to observe whether the continuing enthusiasm of the first-year term at Westminster can be maintained and transmitted to any substantial portion of the faculty. Such transmission is essential if critical thinking is to become a matter of pervasive faculty concern and student benefit.

I believe that, at Westminster, promising present indications will be reinforced by the efforts of the second-year team which has begun its year of study. Faculty enthusiasm, student responsiveness and administration support suggest that momentum toward instilling greater capacities of critical thought at this institution will proceed.

The first-year team at Westminster has met regularly beyond the intensive period of preparation during the summer.

Enthusiasm for the project and for what enhancement of critical thinking abilities among students can accomplish is high. Indeed, the only "discontent" among the members of this group is that, with the year of formal activity ended, there is uncertainty as to how best to continue study and development. Members of the group have searched for promising grant opportunities. To date application has been made to Project QUILL of the Association of American Colleges.

Some frustration has been experienced because of the need not to transgress the activities of the second-year team.

In our discussions several comments were made as to the process of training faculty:

1) Several are uneasy about the techniques of evaluation. Greater effort is needed to define the most effective tests and to demonstrate their validity. Skepticism in this regard seems most acute among social scientists.

2) Instruction in syllabus preparation was superb. Faith Gabelnick has many valuable suggestions and is effective in transmitting them.

3) General discussion among faculty as to what problems we experience in class and how we respond to those problems was rated as one of the most beneficial aspects of the project. In that regard the project served as a valuable tool of faculty development. Members of the Westminster team were unanimous in that opinion.

4) Several consider there to have been an excess of theoretical discussion to the exclusion of necessary practical "how to" instruction.

Eugene G. Sharkey
Associate Professor of History
Coordinator, FIPSE Project

PROBLEM LIST -- from Mount Union Thinking Teachers

1. Difficulties in Integrating Perry, Kolb, MBPI

These three approaches to understanding individual differences and development were invaluable in helping us see and comprehend the diverse needs of our students. But it is not easy to utilize the results of Kolb and Myers/Briggs tests or theory in teaching for movement on the Perry scale.

2. Attempting Too Much

"Perhaps I expected too much--perhaps I attempted too much--perhaps I just needed more time with the students." This refrain was echoed by several teachers.

3. Tension Between Covering the Material and Teaching Critical Thinking

Apart from the inherent tension here (especially when "covering the material" means lecturing), it is easier to lecture--and we are habituated to do so. It takes more work to cover the material through techniques that encourage thinking and not just memorizing. Our time and energies are limited, and out of loyalty to our subject matter we dare not leave anything out.

4. Amorphous Nature of Critical Thinking Skills

While we can spot thinking abilities in our students and name some of the processes involved, such skill cannot be directly and confidently taught. Teaching it certainly involves negative criticism, and it is not too difficult to spot poor thinking. But now another problem emerges, for when we point out to students some faulty reasoning we generate . . .

5. Student Resentment.

Students (as expected of Dualists) feel we are not grading their work fairly. Their failures were the instructor's fault because he/she did not explain clearly enough just what he/she wanted.

MARIETTA
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MARIETTA, OHIO 45750
614-373-4643

Letter - sent to Faith
Copy of it was
I sent to Faith.
Stan

Jan. 28, 1987

Dear Faith,

Enclosed please find a list of problems Marietta College has encountered with the project to date.

1) We feel that there is room for improvement in general project management. In particular we need more lead time when asked to do particular projects or presentations at meetings or for submission of material. Also the group is concerned about shifting guidelines as to requirements for log abstracts, etc.

2) We feel more concrete training is necessary to help groups move from the KOLB and MBTI results, for students, to the practical application of those results in the classroom and in the creation of specific student assignments.

3) We feel too much time has been wasted in consortium meetings on generalities. We would like to see more specific examples in

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various disciplines illustrating how to challenge and support students - eg. more specific case studies.

4) We feel Kolb is important. However more specific work needs to be done with Kolb, e.g., how does one help an assimilator learn to use diverger and accomodator styles of learning?

:) We feel a wider variety of disciplines need to be touched on so as to provide many examples.

) We feel the summer working on syllabi could be equally successful just by receiving the syllabi with comments which could be implemented by a follow-up phone call if the faculty member wished to do so.

) We would like to see a mechanism set up that insures effective participation by the eight member colleges, and if a college fails to participate fully it should then be dropped from the program, c.f. Muskingum College's failure to participate fully.
Any future projects should have built into them money paid to institutions to ensure released time for participants.

Steve Kramer

CRITICAL THINKING EVALUATION

Participation in the Critical Thinking Program resulted in a number of changes in the way I taught my Abnormal Psychology course this past term. This paper will attempt to summarize those changes as well as evaluate the overall impact that this project has had on my teaching. The paper will be divided into three parts: the changes that took place, the problems encountered, and the general conclusions reached as a result of my participation in this program.

(1) Changes: (a) Due to my participation in this project, I became much clearer about my objectives for this course. In other words, I became more aware of what I was trying to accomplish in this course and more definite about what it was that I wanted my students to pick up through their participation in the course. This area of being clear about my objectives has been a consistent weakness of mine in several courses in the past. (b) My syllabus changed significantly also, not only in the area of objectives being stated more clearly, but also in the way I stated my expectations for my students and the rationale provided for different practices that I followed in the course. I also was more clear in the way I made various assignments in the syllabus. I removed some of the ambiguity that had presented problems in past courses. (c) The biggest changes were seen in the evaluation process. Several of the methods used in the evaluation process were modified to reflect more use of critical thinking methods. For example, the questions used on examinations and on the reflection questions were attempts to draw more critical thinking from the students. (d) In addition to using such questions, more time was spent going over the answers to the test questions and the various responses given to the reflection questions. This was an attempt to show them what was involved in thinking critically. (e) In addition to these more obvious changes in the course, I think there were changes in the way I looked at responses not only on the tests, but also in class. I was better able to recognize different stages of cognitive development reflected in the answers given by the students and consequently, better able to respond to them.

Outside of these changes, I don't think there were many other changes in the actual classroom activities. To summarize the changes that took place, then, it would be fair to say that most of the changes took place in the way the syllabus was laid out and in the way that the evaluation of their learning was assessed.

(2) Problems encountered: There were several problems that I encountered related to my goal of increasing the critical thinking of my students. (a) One problem was my tendency to allow the importance of covering certain

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material to overshadow the greater importance of realizing gains in critical thinking. (b) A second difficulty was that past habits and ways of doing things were often very appealing and difficult to avoid. It was hard to change and not be pulled back by the way I had done things before. (c) Thirdly, many students really had a difficult time with thinking critically and did not appreciate this type of focus. For example, I found that the assignments that tried to draw most on the critical thinking of students were the assignments that received the most negative reactions from the students. Feedback in the form of student evaluations at the end of the course was quite negative in this area.

(3) General conclusions: This area will be sub-divided into five parts: improvements realized, weaknesses, unanswered questions, realizations, and implications.

(a) Improvements: Several improvements in my teaching were realized as a result of this project. Some were alluded to in the change section above and so I won't repeat those. In addition to those, I would include the following: In several ways, I came to focus less on factual knowledge and more on the thinking process. This could be seen in the type of questions that I asked both in class and on tests. Both I and the students came to a deeped appreciation of analysis, synthesis and evaluation of material. In addition to this, I became more sensitive to individual differences in learning styles and stages of cognitive development.

(b) Weaknesses: In spite of the improvements mentioned, I still see need for improvement in several areas. For example, I still do not focus enough on my objectives and keep them in mind as I am preparing for and involved in many classes. This is especially true when I find myself getting busy and not having the time to really think through what I want to accomplish. It is in times like this that I tend to focus on "covering the material", even if it means little more than lecturing about it. I need to keep critical thinking objectives in mind at times like this. A second related weakness is my tendency to forget about critical thinking objectives when I'm getting behind or when I sense the class is tired of this focus. Perhaps I need to find a more constructive and interesting way to present some of these ideas. I think, though, that my biggest weakness is that I have not yet developed adequate skill in helping students develop their critical thinking skills. I can point out somewhat when it's there and when it isn't, but I don't know how to teach those who are not thinking critically how to go about it. Some merely feel I'm not being fair to them in grading their responses. Some feel that I haven't explained what I'm looking for clearly enough (perhaps this is true). But something more directly needs to be taking place here. Another weakness

occurs after tests and reflection papers are handed back and we are going over them. This would seem to be the best time to really go over what would be more constructive ways to address the questions. However, the atmosphere never seems right at this time. Their grades are their big concern at this time and I sense that there is little interest on their part to go over the questions in great detail. Consequently we have yet to really make the most of this potential. This is a real problem.

(c) Unanswered questions: A few things that are still hanging that need to be answered more adequately are the following: (i) how to really evaluate critical thinking in a way that makes sense to the students, (ii) how to efficiently take into account differences in learning style without increasing my workload so dramatically and (iii) find ways of really assessing how much improvement has taken place during the course of the term on these critical thinking variables.

(d) Realizations: I have come realize several things through my participation in this project. (i) It is hard to do everything you'd theoretically like to do. (ii) It is often difficult to translate abstract ideas into practice. The realities of what a class will respond to, how much time there is, etc. makes this difficult. (iii) It is very time consuming to evaluate critical thinking and also much more subjective. It is easy to understand why many professors stay focused on factual knowledge. (iv) It is hard to design questions that tap critical thinking skills and also are reasonably easy to grade.

(e) Implications: Several implications have already been alluded to in earlier sections of this paper. In addition to these, I would include the following: (i) I need to put still more attention on my objectives and focus on sticking with them more consistently. (ii) I need to find some efficient ways of taking different learning styles and stages of cognitive development into account when I design both activities and evaluation materials. (iii) I need to develop more interesting and constructive classroom activities that tap critical thinking skills. (iv) I need to find a better way of going over tests and other evaluation materials so that students can gain effectively from them. (v) I need to continue this critical thinking focus and carry it into other courses. I plan to do so this coming term when I teach Personality.

Overall, I am aware that this has been a valuable experience for me. I know that I have gained in several ways. It is important to reconsider periodically what we are doing in the various courses we are teaching and use this to revamp our approach. It keeps us alive and makes our course a far more valuable experience.

EVALUATION OF CRITICAL THINKING COURSE

Introduction to Philosophy -- George Thomas, Mount Union College
Fall semester, 1986

I designed my course as one in the philosophy of life, following Socrates' dicta "Know thyself" and "The unexamined life is not worth living." We used James Christian's textbook, PHILOSOPHY: AN INTRODUCTION TO THE ART OF WONDERING. In addition to five tests and three papers, the students engaged in a series of class exercises, participated regularly in small discussion groups, and wrote self-assessment reports on what they learned about themselves (on which I commented extensively).

The critical thinking model that I used was the Perry scheme. I organized the course -- group discussions, class exercises, and written work -- around Perry's principles of support and challenge. And I aimed it primarily at students in Perry's first three stages, incorporating some options for those in the next two stages.

Now that the course is over and I have studied the student evaluations of the course, I have several insights on the effectiveness of my project. The students unanimously found the detailed syllabus helpful. They commented that they knew exactly what all the class policies were, and that they knew exactly what

to do and when to do it. I was not surprised by their liking the explicit syllabus.

What did surprise me was that most of the students said that I was very sensitive to their needs and was always available when needed. I did talk to a few before and after class occasionally; but I don't think I had more than three or four conferences (out of twenty-eight students) the entire semester! After puzzling over these comments, that I have not been getting in the past, I decided that they may reflect a change in me as a result my critical thinking study. I think my concentration on the Perry studies has made me more aware of where my students are in their development. I see them as individuals struggling with philosophy's challenge to their limited and rigidly absolutistic worlds (most of them are clearly dualists). I could see the confusion and frustration in their faces. So I have been inclined to encourage them with more explanation, statements to give perspective, to let them know that they are not alone in what they are experiencing and that if they persevere they will grow as a result of their confusion and frustration. This is conjecture on my part, but I think I am right.

One thing that seemed to help the students was personal anecdotes. I shared experiences from my own life, from students in past classes (unnamed and from years ago, of course), and discussed changes and crises that they themselves can expect when they grow older. Directly related to this, we did a class

exercise in conjunction with a chapter in the textbook on "Life As A Whole." I had them do a life inventory covering their lives from birth to death (projected, obviously). Having to step back and take an overview of their whole life, they were able to see where they were going -- and if they were going nowhere, they could see that too. They became more specific and less general about their hopes and goals.

I also dealt explicitly with the problem of authority. This related to a recurring theme in the textbook, the problem of autonomy (in connection with separation anxiety, laws and conscience, ethical decisions, religious views, self-identity, knowledge-claims, etc.). We did several class exercises focusing on this theme. More importantly, I frequently used my lecture-discussion method of presentation as a laboratory in which I deliberately taught them how to relate to an authority figure -- me. I retained my authority status but openly invited them to challenge me in an assertive but not aggressive way. They not only learned from this; they enjoyed it.

In their self-assessments, the students repeatedly expressed appreciation for the small discussion groups. They said that discussing not only points in the textbook but also related aspects of their own lives deepened their friendships with those in the group whom they already knew, and opened up new friendships that continued even outside of class.

We can see from the above that my approach was very strong on support; however, my planned challenges did not work as well. I gave alternative paper topics for each paper, one dualistic and one more relativistic; and allowed the students to self-select one. For the first paper, six of twenty-eight chose the more relativistic topic -- they did not do well with it. For the second paper, only one student chose the relativistic topic -- she did poorly on it. For the next paper, I withdrew the option and had them all do the dualistic paper.

Still, there were some successful elements of challenge in the course. I think that the small discussion groups challenged some of the students. Several reported that hearing the views of others so openly expressed affected their own views. Especially effective in this respect was a discussion of an ethical issue similar to the famous "alligator river" story, but with three explicit ethical positions provided half way through the discussion to provide a context. Many students reported being surprised and displeased at their own legalism or formalism, and some reported revising their views as a result of the group discussion.

Philosophy itself is a challenge to students' thinking. A common evaluation of my course has always been that "it makes you think." This class was no exception. Most of the students said that it was an intellectually stimulating and provocative class, and that it disturbed their usual way of thinking.

This last comment suggests to me that despite the failure of some of my deliberate attempts to incorporate elements of challenge into my course, the support that I gave students as a result of my study of the Perry scheme provided an excellent balance to the challenge already inherent in philosophy itself.

Journal Abstract

John Bienz

The paragraphs below are numbered to correspond to the assignments that are described starting on page three of Appendix A at the end of this "Journal Abstract." Appendix A should be read before the abstract. Appendix B is a syllabus for a new course that I am teaching for the first time this semester (Spring, 1987). This new course, Advanced Writing, is taken mostly by upperclass students. Since according to the Perry model these students are more likely to be multiplists, I have set up the course from the start to ask students to assume multiple viewpoints. Only toward the end of the course will students be asked to evaluate themselves and clarify what they can of an emerging adult personality as they look forward to entering a career. In many ways the syllabus for the new course reflects the concepts in the "Strategy" in Appendix A.

1) While this assignment worked well as a warm-up exercise, getting the members of the class to understand one another a little better and helping them feel more comfortable with one another, it probably contributed the least to the research project. The reason is probably that the distance between the topics chosen for research (SDI, for example) simply seemed too far removed from students' personal experience for them to see a way to carry over the techniques of this assignment to the later one.

2) For this assignment I used the film MASK. I chose this movie because on an emotional level many freshmen seem to respond very strongly to it and because it presents multiple, sharply

conflicting points of view on one issue: the social integration of a person with an extreme deformity. In general I was surprised at how well students succeeded in representing diverse points of view without taking sides. Many were able to capture the style and thought of both the calmly bureaucratic principal and the unrestrained and self-involved mother convincingly.

3) This assignment was, I believe, the most useful. Probably as a result of the impossed structure of this paper (as described in the "strategy"), many students began to sound like contextual relativists. The use of concessions also proved very helpful in shaping more thoughtful research papers later in the course.

4) For this project, I allowed students to take several articles all on the same topic (e.g., three articles on AIDS). This was a mistake since it was too easy. In the future I would prefer to require that the headlines at least of the articles synthesized have no obvious common topic.

5) I think many students found this to be the most difficult of the assignments, and in general, I did not feel many students were able to see much more than the most conspicuous hidden assumptions. I suspect the problem is a lack of wide experience and information on the part of the students. Nonetheless, I like the assignment even if it is only a beginning for most in spotting unspoken assumptions.

6) Unfortunately, I tended to neglect this project, and the result was a problem in the research paper. See the next paragraph.

Research Project: Most of the assignments above did seem to converge in the research project in a way that helped students

generate useful insights into the positions they analyzed. In their evaluations at the end of the semester, many students expressed appreciation for this pattern. The most consistent success of the research project, however, as I see it, was the way it closed off conventional high-school approaches to research that students otherwise might have been able to carry over mindlessly into this course. Although students did use note cards and documented information, quotations, etc., they were aware that this project was unlike any they had done previously and therefore they had to "think about it," as a number of them wrote in their course evaluations. Admittedly, I am inferring just what students meant by "think" since none attempted to articulate any mental process more precisely. However, if "think" only meant not falling back on habitual patterns rather than the higher order reasoning abilities Perry writes about, something has been gained in my judgment. My major disappointment with the research project, on the other hand, was a tendency for students to assume that readers knew of their approach and that no objective clarification was needed. For example, many students referred to their main sources as the "three authorities" from the first paragraph of their research papers on as if the personalities in that triumvirate were common knowledge and as if it was only eternal and natural that there should be three of them. Perhaps a dualist will be a dualist, no matter how many contextual relativist tricks he or she might learn! More seriously, I believe some progress was made, perhaps in ways that will not become habitually functional in students' thinking until a later time in their development. At the very least, I think a fair number of my

students have gained real appreciation for the value of concession making, if only as a persuasive tactic.

English 100: College Writing
Fall, 1986

Prof. Bienz
Chapman Hall 341
Extension 258

The goal of this course is clear and effective expository writing. EH 100 requires weekly written assignments (of two to three typed pages) based on classroom discussion and reading, and a research paper (about 2,500 words). Individual and small group conferences will help students invent, organize, and express their ideas.

During most of the semester, the following pattern will be used:

Monday - paper assignment due in finished form, next paper assignment made;

Wednesday - reading assignments (or other preparation assignments) due;

Friday - rough draft of weekly paper due.

All assignments are due at the start of class periods, and all written assignments must be submitted in person. After finished papers have been returned, corrections must be turned in at the start of the next class period. All finished papers are kept on file in the English department.

Work on the research paper will begin on October 3 and the completed paper will be due November 7. A detailed schedule for the research project will be distributed later in the semester. One in-class essay (ungraded) and a final examination will complete the assignments for the semester. The grade for the course will be based on the following proportions: each weekly paper will count 1/12 of the semester grade, and the research paper and the final will each count 1/6. Grades will be lowered if drafts, preliminary work on the research paper, finished papers, or corrected papers are not submitted on time. Also, excessive absences will result in a lower grade in the course.

Strategy

The syllabus is set up to allow about eight short (two to three typed pages) papers and a research paper (of about ten pages). The amount and distribution of writing follows the pattern our English department has agreed upon for this course. Beyond these requirements, each of us is free to set up specific assignments and strategies. My intention this fall is to design a sequence of assignments that emphasize critical thinking and that make use of William Perry's research into the cognitive development of college students. Specifically, I intend to organize a set of assignments that will make the research project more valuable as a critical thinking project. In the past, I have too often expected students to move to the level of committed relativism during the research project (since I have expected students to take a stand on a controversial issue by developing a thesis statement even as they fairly presented and evaluated multiple points of view). At the same time, students have often seen the research project merely as delving into a subject and have measured success by such dualist standards as the number of quotations or notecards used and by the number of pages written.

This fall, prior to beginning the research paper, I would like to establish two principles through a series of five short-paper assignments:

1) research is less a delving into a subject than it is a dialogue with authorities (by "authorities" I simply mean people who claim to know something - in the course, this will usually mean published authors, other students, or myself);

2) what is at stake in this dialogue is not really a student's "thesis" (a brief and formal statement of a position) but rather a deeply-rooted point of view which includes a variety of attitudes and beliefs built up through the years of the student's life experience.

My purpose in constructing the five assignments prior to the research project will be to give students experiences and techniques in clarifying, challenging, and modifying points of view, both their own and those of others (of other "authorities"). Although I intend to make these purposes explicit to my class before we begin the research project, I do not intend to belabor them with theory or strategy until I feel I have reached a point where the writing they have already done will enable them to understand these larger goals (here is the main reason for a short syllabus: I want to save the fuller explanation until I have set up a basis in experience for understanding it).

While I am not a psychologist, I have tried to break down my expectations for research into a set of specific "cognitive abilities." By recalling my past expectations for research, I have come up with a list of six abilities. This list is not meant to be complete, but it is intended to emphasize a critical exchange between competing viewpoints. Also, each ability allows many approaches. What follows is a list of the six abilities and proposals for writing projects aimed at teaching each ability.

1) The ability to recognize and present evidence in support of general statements.

   Project: I will share an account of a personal experience that taught me (or some other writer) a valuable truth. I will ask students to share (informally and orally) similar valuable experiences. Students will write out their experiences in draft form, first, for a friend who knew nothing of the experience (all the details must be told), then, very briefly for someone who shared or heard of the experience already (for someone who only needs to be told the meaning). Finally, students will combine the two papers (evidence and generalization) into one.

2) The ability to compare and contrast two or more points of view while withholding judgment about them.

   Project: I will show a film twice out of class and in segments in class. Students will be placed in groups and asked to take the points of view of characters who have sharply opposing ideas about an issue in the film. Students will then write imaginary interviews with two characters with opposing positions. The students should not use either character as a mask for their own points of view, or allow either character to change his or her mind, or interject any sermonizing or editorializing of the students' own.

3) The ability to make concessions to opponents when they have a point.

   Project: I will provoke a discussion about what sort of statements make my students angry. I will list incendiary statements on the board (about ten to twelve); I will ask students to write these down and indicate their positions individually (or if they are neutral on a particular issue, to say so); I will pair students to place people with sharply opposing viewpoints together. Each member of each group will present her or his position orally to the opponent who will take notes. Students will then write papers about two-thirds of which will sum up their opponent's position and make concessions to it before (in the final one-third) the student maintains her or his own position.

4) The ability to synthesize two or more published points of view or to integrate a published point of view with ideas of one's own.

Project: I will read two opinion columns from current newspapers or magazines, and we will discuss similarities and differences. As a class we will try to combine them as much as possible. I will then hand out pairs of opinion essays from published sources, and students will either synthesize them or integrate them with a position of their own.

5) The ability to grasp an authority's assumption when they have not been stated explicitly.

Project: I will distribute mailings (that I am now collecting) that request money: mailings from political or religious organizations or from public interest campaigns, for example. We will discuss - in small groups and as a class - what is said explicitly in these mailings and what has to be read between the lines (or <u>might</u> be read there). Each student will write an essay analyzing the assumptions that he or she can reasonably infer from one mailing.

6) The ability to present ideas clearly in writing to a reader who has no knowledge of the student or the course.

Project: This will be developed parallel with 4 and 5 above: those two papers must be written to be clear to someone outside the class (even outside the college). For this reason, papers for projects 4 and 5 will be documented and in third person.

When this series of projects is completed (or is nearing completion), I will begin to explain how they are related to research. My first hope is that the projects will initially seem interesting and varied in themselves - but I will eventually explain my larger goal. What I really hope to provide students is a <u>rhetoric of invention</u>, one based not on formal "topics" or "categories" of invention (such as definition, comparison and contrast, cause and effect) but on techniques for drawing out and challenging attitudes and assumptions. These techniques should accomplish what the traditional topics of invention were supposed to do: generate critical analysis. For the research paper, each student will pick an issue and will be asked to find two kinds of sources concerning it: those sources that provide factual information and those that provide a point of view (since these overlap, I will ask students to classify their sources according to how they use them). I will not limit informational sources; sources presenting points of view should be limited to three. Most of the research paper will discuss these three sources (using the informational sources only for verification of fact).

The following criteria should be used to select the three sources:

- credibility of the author as an authority;

- clarity of the writing;

- divergence in point of view from the other sources.

In light of the first five assignments, my hope is that students will not panic at the thought of using only three main sources for a ten-page paper. Students, at this point in the course, should be able to ask of each source (and indeed of each statement in each source) these questions:

1) Do I have any life experiences that would give me evidence for agreeing or disagreeing with the claims to truth this authority makes?

2) How is this author's point of view similar to or different from the other points of view I am considering?

3) Can any of the points this author makes be combined with points my other authors make - or with points of my own?

4) What are the unstated assumptions behind this author's remarks?

5) In areas where I disagree with this author, can I still grant him or her some ground?

Obviously, not all of these questions will be equally fruitful for each author; yet I hope with these questions in mind and with experience in using them, students will be able to generate as much as one to two typed pages of their own critical analysis from one carefully chosen statement of one authority, and certainly ten pages from three published sources.

Following the research project in the final three weeks of the course (as I read and mark the research papers), students will write three more short papers less dependent on the project I have outlined here. Also, from the first week of the semester, time will be given both in and out of class to such matters as punctuation, paragraphing, etc.; but I have not discussed these areas here since they do not reflect my use of Perry.

English 245: Advanced Writing
Spring, 1987

Prof. Bienz
Chapman Hall 341
Extension 258

The purpose of EH 245 is, of course, to continue to develop clear, effective expository prose (a life-long endeavor for all of us). Another purpose will be to use writing to discover and clarify different perspectives or points of view, particularly as these concern your future life's career. Towards these ends, the course will have three phases outlined below.

Phase I: Getting Out of Your Skin, or Seeing Life as Others See It

Each of these assignments will be written from the perspective of a person different from yourself or at least from the perspective of a person in circumstances quite different from your own present situation. Each assignment will take from about a week to a week and a half and will involve preparatory reading and/or interviews, occasional group planning, and in-class analysis of your rough draft. The final paper for each assignment will be about 750 words. The topics of the papers and the dates for each assignment will be as follows.

January 5 to 14 -
Public Demands and Private Desires: You will analyze conflict between an individual (not yourself) and his or her tribe.

January 14 to 21 -
A Transexual (Professional) Experience: You will write a reflective essay on the experience of crossing the biological divide to see momentarily the career perspectives of the opposite sex.

January 21 to 30 -
Radical Decisions: Groups will devise career crisis scenarios. Each student will be assigned a scenario and must write his or her strategy for a successful response.

January 30 to February 6 -
Ordinary Deviance: You will write an essay from the perspective of someone who of necessity lives on the fringe of social toleration.

February 6 to 13 -
The Company Perspective: You will write an essay from the perspective of a person in an organization who affirms the boss's point of view.

Phase II: Looking into the Future

In this part of the course, each student will select a real career possibility and, using the perspectives of the assignments above, examine how the chosen career looks from different points of view. This part of the course will require interviews with at least two professionals actively engaged in the career as well as substantial background reading. The final result will be a class

presentation and a paper (from 2000 to 2500 words) that reveals the findings of the examination organized according to four or five distinct perspectives and culminating in your own evaluation of the career as a way of life. This phase will be scheduled between February 13 and March 27.

Phase III: Going from Here to There

During the last weeks of the semester, all students will be involved in a job search process as both employers and as prospective employees. Details of the process will be made clear at the start of the project. Among other activities, groups will define openings and criteria for hiring, resumes and cover letters will be exchanged, interviews will be held, and letters of acceptance and rejection will be prepared and sent. There will also be a self-evaluation of about 750 words to be written during the last week of the semester.

It is hoped that this series of assignments will help you become a clearer and more critical writer and a more thoughtful and self-aware person. The proof of these ends will lie beyond this course. In the short run, however, the assignments will be graded, and the result will become a part of your transcript. These proportions will be used to determine the final grade: each of the assignments in Phase I, 10%; the career investigation and presentation, 10%; the career investigation paper, 20%; the items written as part of the job search process, 15% (this grade will be based partly on your work as an individual and partly on the work of the hiring group in which you participate); the final exam, 5%.

Katherine Coram
Bethany College
ECC Project of Critical Thinking
First Year Team
Department: Sociology and Social Work
Course Revised: Introduction to Social Work Practice

Journal Abstract

I chose to revise an introductory course in social work practice. This, I believed, would enable me to begin revising foundation knowledge and skills, and through learning from this experience to make necessary revisions in the courses that follow. Since this is the first social work course for many of our majors, it also acquaints them with what is to come.

In the past, content from this course was presented primarily in lecture format, with a few in-class exercises and limited videotape exposure. Basic presentation changes, in hope of assisting and stimulating critical thinking skills, included: increased in-class discussion time, journal entries which encouraged students to think about and respond to course content, and increased use of outside readings to supplement text information. In addition, students were often assigned articles to report on in class. Questions or issues arising from discussion, journals or article reports were actively debated and conflicting opinions were explored.

The course outline itself was extensively revised. Office hours were included and clarified to set the basis for student-instructor interaction outside the classroom. To encourage students to read articles listed in the outline, information regarding the articles and their location was added to the text listings. Course objectives were reworked to increase consistency in wording, clarify language, and divided according to what students learned about content as compared to self-knowledge. Since the practice of social work involves extensive use of self, critical thinking skills need to be developed in this area as well. The next change entailed an adjustment in language regarding videotape exposures. The prior wording left the student with

the impression that these experiences were graded; therefore, the words pre- and post-test were replaced with pre- and post-assessment.

The most significant changes on the outline entailed changes in and expansions of semester assignments, including: (a) the introduction of the journal entries; (b) a detailed explanation of the mid-term and final examinations; and (c) the use of the Kolb system of learning styles to create an option for each style in the term project assignment. The latter change was the most difficult to develop and I remain unsure of its success, as all of the students tested as 'convergers.' (Interestingly, four of the students opted to do a research paper, and two developed 'scripts' utilizing key concepts.)

Final changes included an expansion and clarification of the attendance policy, and the addition of a grading policy, to clarify expectations and standards employed in the course.

I spent much of the first class period going over and discussing the course outline, and referred to it periodically throughout the semester. It came to be an anchoring point for the class to observe progress on objectives, readings, and assignments.

Based on the experience of the past semester, I plan to make additional changes to this course, including: beginning the course with the content on interviewing skills before moving into problem-solving, etc; assigning the process-recording/videotape experience earlier in the semester; requesting student notes on the term project be submitted for review two weeks prior to the date of assignment; and changing the titles of term project and term assignment to semester project and process-recording, to clarify confusion.

The revision of this course, as a faculty experience, has enabled me to learn about my teaching/learning styles as compared to those of others and to observe how these effect course construction and development. Being exposed to faculty from other institutions and a variety of backgrounds changed my way of thinking about teaching this course. The input from others was invaluable in assistance with course revision and increased knowledge of student learning styles. The assigned reading materials on Perry, Kolb, Myers-Briggs, etc., were helpful as well in developing and refining teaching skills.

As a course development project, I feel that this experience was most worthwhile. The revisions enabled the student to have a clear idea of what they would be learning and what would be expected of them as well. I had fewer questions on examinations, assignments, readings, etc. than ever before. In fact, I am so pleased with the results that I am beginning major revisions in course outlines for spring semester, utilizing what I've learned this past year.

The change in behavior and attitudes toward course content was phenomenal. As opposed to prior classes, students were more involved with the subject matter, often read additional articles, and were prompt in completing all work. Additionally, I frequently overheard students discussing the course before and after class, and during breaks. Comments by students were generally more positive, and even though the course is offered in a two-hour block in late afternoon, it was much less difficult to keep them on task.

In conclusion, I might add that in beginning this project I was somewhat overwhelmed and bewildered by the wealth of information provided to the team in the initial training periods. However, once discussed with the team and worked through, it was extremely beneficial in understanding the dynamics of the classroom behaviors.

The teaching of thinking in French courses adds yet another element to the already wide range of material to be covered. I chose an intermediate French course for the purposes of this research for a variety of reasons. First, because it is such a hodgepodge of a course I figured one more aspect to the curriculum could not hurt. Also, the nature of the course is that of review which enables an instructor a certain amount of flexibility; the course content should have been presented and assimilated reasonably well at the elementary level, so certain aspects can be dealt with in more depth. To this end I introduce a very strong element of French culture.

In keeping with guidelines established by ETS/ACTFL for proficiency in foreign languages I decided to structure the syllabus around certain cultural situations or survival skills. All the activities of the lesson were geared at reinforcing or teaching the necessary skills to accomplish my goal; that is, all of the vocbulary, grammar, readings, drills, etc. were used as means to this end. This, of course, called for a total restructuring of my previous course which included the addition of certain activities previously untried and a reordering of the textual material to become more appropriate.

It is difficult to single out specific teaching techniques that I found to be particularly successful. I administered the MBTI at the beginning of the term and was only partially surprised at the large variety of types in a class of 27. I therefore set out methodically and passionately to vary the types of activities to appeal to the largest number of learners.

With great guidance from Al Johnston and other Westminster FIPSEites, I began working with Bernice McCarthy's 4Mat System model as a means of appealing to different learning styles. From this point on, I concentrated primarily on this aspect and hoped that somehow I could thereby improve the critical thinking skills of the students. The material of the course seemed

to respond well to the imposition of the McCarthy model. It took a certain amount of re-working and crowbarring, but I finally began to get things to fall into place. By the end of the summer, I had successfully designed five McCarthy cycles to correspond to each chapter of the text that I would cover in the fall.

With some trepidation I began plodding my way through the cycles in class and was surprised by the interest of the students. I noted that some students responded well to some activities while others preferred different ones. In my previous experience where I had not concentrated on appealing to different learning styles, it was ususally a certain group of students who seemed continually to lack enthusiasm. Now, it seemed as if there was no one who was always totally enthusiastic, yet I also did not seem to be totally losing anyone either.

About two weeks into the term we organized a meeting to introduce the students to the MBTI and discuss their results. I thought that most students demonstrated a keen interest in these proceedings and as I explained to them briefly about my course methodology I saw an increase in enthusiasm in general. I think that as they became aware of their individual preferences for one activity or another, they responded enthusiastically to their preferred activity but also lost less interest in activities that did not particularly appeal to them because they knew that the activities would change rapidly. For example, some students hated the almost weekly microthemes, while others felt that this was the most worthwhile aspect of the course. It was interesting for me to note that when we made an excursion to a nearby grocer as part of our unit on food that some students were particularly enthralled with the hands on experience while others thought that it was totally ridiculous.

On the whole I am very enthusiastic about the progress that was made this term. I did experience real frustration at not being able to re-vamp other courses that I was teaching because of a lack of time. When the student evaluations came in, I received a good deal of positive feedback on the variety of teaching techniques and on the pacing of the course. To improve the course in the future, I would like to fine-tune some of the parts of the cycles and place more empnasis on the experiential end.

As a means of faculty development, I feel that this was a very worthwhile project. It made me aware of the way I taught and I began to scrutinize methods that I had used for years that were sorely in need of re-vitalization. I found the McCarthy system to be the most beneficial and I would strongly encourage a formal discussion of it in future workshops.

From the point of view of course development, I can hardly wait to revise other courses that I offer and I am waiting only for a block of time when I can concentrate on them. My department has an NEH grant to revitalize completely all of the courses so I will be able to put my FIPSE experiences to work very soon.

As a vehicle to improving critical thinking, who knows? I feel very inadequate to judge my students critical thinking abilities. Throughout the course I targeted activities at the dualist level; that is, I tried to design activities that would encourage them to make a choice where no clear-cut approach was available (in particular, I used many cross-cultural situations). However, I really have no way of concretely evaluating student improvement in this domain.

FIPSE Report -- Phyllis Kitzerow

In reflecting on the FIPSE course and more generally on the FIPSE experience, what comes through is the group experience. This began with our shared feelings of disappointment with the Willets presentation. Our group, at this point, was just beginning to feel some sense of being involved in a common endeavor. Thus it was a dash of cold water to have such a useless conference.

The meeting at Bethany both reassured me and stimulated my thinking. I found some guides to action both on translating theory into classroom practices (Rogers) and some information on constructing a syllabus and on what might be done with the Myers-Briggs material (Gabelnick). This was also the beginning of closeness with the group, particularly with what I came to think of as the core group. Perhaps being the only female member of the group and also being very people-oriented made me anxious to emphasize the bonding and groupness of the people involved.

About this time, I changed the course I would work on to "Criminology," one of my least favorite courses to teach. And, indeed, one of the successes of the experience was the change in my feelings about the course. It's s I not my favorite but it's definitely moved up.

The summer work was very important to me. I liked the structure that we built into the experience--assignments, topics chosen for the next time, etc. Having the syllabus as an overall goal was useful in keeping us on track, but even without this, we seemed to remain both task-oriented and introspective.

Much of our time was spent discussing teaching, how we do it, what works, what doesn't, how each of us handles the problems that come up. I have wanted a forum for this sort of discussion for years. This was immensely helpful for me. It was also very reaffirming. I found that the people attracted to FIPSE tended to teach in ways similar to mine. This experience was particularly useful in an atmosphere where there has been little feedback and little attention paid to style and mechanics of teaching. Thus simply having the opportunity to talk about teaching was valuable and to do it in a group I felt comfortable with and close to was even better.

Another element in the summer work was Al Johnston's contribution to the group of useful material, particularly the McCarthy circle. This became an interesting assignment and extension of some of the earlier material. I felt the FIPSE sessions and plan were generally light in content and this satisfied some of the need for more content. The assignment that I did for the McCarthy circle became a part of my class. A copy is attached to this document.

The reworking of the syllabus was very useful and has become a transferable skill that I now use for all syllabi. The course did not change as much as I had expected and hoped. I found that it was all too easy to slip back into what I had done. However, I was not

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all that unhappy with what I usually did. What I really needed was some prod towards organization and defining objectives and communicating those objectives. The work on the syllabus and on McCarthy really did that for me.

Summing up then, the FIPSE project was tremendous as a faculty development experience for me with much of the credit going to our campus group. It was fairly successful as a course development project. I felt it added only a small contribution to my teaching insofar as increasing the students' critical thinking skills. I feel that my style of teaching which emphasizes informed skepticism was only slightly aided by this project. But I think the project did us an enormous amount of good in terms of rejuvenation.

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APPENDIX E

Videotape Highlights of October 1987 Workshop Otterbein College

□□ Opening Session

Larry Grimes "A Mantra for Thinking"
John Bing "Beyond the Perry Paradigm"
Faith Gabelnick "Testing the Thinking Models by Modeling Those Models: A Faculty Development Approach to Thinking Paradigms"

□□

Interviews with Project Faculty: (interview questions attached; each interview is about 20 minutes long - focus in on the act of teaching)

Those interviewed were: Jerry Beavers (Religion), Donald Buckey (Philosophy and Religion), Maria Caldrone (Equine Science), Beth Dougherty (English), Kathy Feathers (Education), Gwen Fisher (Psychology), Matthew Hils (Biology), Patricia Lamb (English), Arthur Murdoch (Chemistry), Kenneth Porada (Psychology), and Nancy Siferd (English)

□□

Workshops Taped Were:

Thinking and Problem Solving Techniques: John Hinton (Math), Matthew Hils (Biology), and Arthur Murdoch (Chemistry)

Classroom Teaching Strategies and the Teaching of Thinking: Kathy Feathers (Education - Thinking About Teaching) and Patricia Lamb (English - Using the Visual Arts)

Critical Thinking and the Teaching of Values: Robert Myers (Ethics exercise), Jerry Beavers (Overview of Intro. to Judaeo-Christian Trad.), Peter Macky (Religion and Art - focus on clips from Cuckoo's Nest)

Writing, Reading, and Thinking: Nancy Siferd, Ruth Wahlstrom, Gloria Malone, and Wayne Rittenhouse (all English)

FACULTY INTERVIEW SHEET (VIDEO INTERVIEWS)
ECC/FIPSE CRITICAL THINKING PROJECT

Describe what you would regard as an ideal year in your life as a professor? What accomplishments in an academic year would lead you to say that you had a very successful year?

In what ways would you say your life has corresponded to this ideal in the last five years? Given your accomplishments during the last five years, how successful do you think you have been?

In what ways has it not corresponded to this ideal?

What has contributed most to your successful pursuit of the ideal?
What has contibuted most to your success?

What has most frustrated this quest?
What has frustrated you most in your attempt to accomplish your goals?

APPENDIX F

□□ student survey form

□□ faculty survey form

□□ Table Two: a presentation of student responses to "thinking across the curriculum" courses arranged from most successful to least successful

THINKING ACROSS THE CURRICULUM
ECC/FIPSE PROJECT [1985-1988]
Please return these forms to your Project Coordinator before November 15.

Student Perception of Courses
Revised and Taught to Improve Higher Order Reasoning Skills

Course Title_____
Instructor_____
College_____

Information about student respondent:
Age_____ Sex: M F
Class: Fr. Soph. Jr. Sr. Major_____

1. To what extent, if any, did this course make a difference in each of the following?

How you think about what you know.....None 1 2 3 4 5 6 7 Greatly

How you respond to differences in opinion.....None 1 2 3 4 5 6 7 Greatly

How you discuss ideas with others.....None 1 2 3 4 5 6 7 Greatly

How you think about what you do.....None 1 2 3 4 5 6 7 Greatly

2. To what extent, if any, are each of the following characteristic of you as a learner?

I ask questions even if there may.....None 1 2 3 4 5 6 7 Greatly
be some risk.

I place the burden for learning.....None 1 2 3 4 5 6 7 Greatly
on my teacher rather than on myself.

I assess my own strengths and.....None 1 2 3 4 5 6 7 Greatly
weaknesses and set my own learning goals

I apply what I learn outside the .....None 1 2 3 4 5 6 7 Greatly
classroom

3. To what extent, if any, did this course require you to do any of the following?

Think about your own values.....None 1 2 3 4 5 6 7 Greatly

Think about what you know.....None 1 2 3 4 5 6 7 Greatly

Memorize course material.....None 1 2 3 4 5 6 7 Greatly

Think about why others think.....None 1 2 3 4 5 6 7 Greatly
differently

Think about how the facts or ideas.....None 1 2 3 4 5 6 7 Greatly
in this course were obtained or came about

Consider contradictory facts.....None 1 2 3 4 5 6 7 Greatly

Integrate what you are learning into.....None 1 2 3 4 5 6 7 Greatly
course papers or activities [Eg., labs,
field experiences, research projects]

4. What did you learn about yourself as a thinker by taking this course?

THINKING ACROSS THE CURRICULUM
ECC/FIPSE PROJECT [1985-1988]
Please return these forms to your Project Coordinator before November 15.

Faculty Perception of Courses
Revised and Taught to Improve Higher Order Reasoning Skills

Course Title_____
Instructor_____
College_____

Information about faculty respondent:
Age_____ Sex: M F

1. To what extent, if any, did this course make a difference in the following student behaviors?

How they think about what they know.....None 1 2 3 4 5 6 7 Greatly

How they respond to differences in opinion.....None 1 2 3 4 5 6 7 Greatly

How they discuss ideas with others.....None 1 2 3 4 5 6 7 Greatly

How they think about what they do.....None 1 2 3 4 5 6 7 Greatly

2. To what extent, if any, are each of the following characteristic of students in this class?

They ask questions even if there may.....None 1 2 3 4 5 6 7 Greatly
be some risk.

They place the burden for learning.....None 1 2 3 4 5 6 7 Greatly
on you rather than on themselves

They assess their own strengths and.....None 1 2 3 4 5 6 7 Greatly
weaknesses and set their own learning goals

They apply their learning outside the .....None 1 2 3 4 5 6 7 Greatly
classroom

3. To what extent, if any, did this course require students to do any of the following?

Think about their own values.....None 1 2 3 4 5 6 7 Greatly

Think about what they know.....None 1 2 3 4 5 6 7 Greatly

Memorize course material.....None 1 2 3 4 5 6 7 Greatly

Think about why others think.....None 1 2 3 4 5 6 7 Greatly differently

Think about how the facts or ideas.....None 1 2 3 4 5 6 7 Greatly in this course were obtained or came about

Consider contradictory facts.....None 1 2 3 4 5 6 7 Greatly

Integrate what they learned into.....None 1 2 3 4 5 6 7 Greatly course papers or activities [Eg., labs, field experiences, research projects]

4. What, if anything, did you gain as a teacher from participation in the ECC/FIPSE thinking across the curriculum project?

5. Was their any significant improvement in the quality of thinking among students in this course? If so, cite examples.

	1	2	3	4	5	6	7	8	9	10	11
1	Total	Total	Tot	845	772	1076	878	784	139	1345	1447
2	SubTotal	Subtotal	--	734	703	962	800	693	131	1243	1320
3	Heuhner	BioZoology	HI	67	25	58	67	33	8	58	83
4	Schultz	EdHumDev	HE	55	36	73	64	36	9	36	81
5	Barkheymer	MusicCulture	OT	75	63	50	38	13	0	75	63
6	Rittenhouse	EngCompLit	OT	47	40	60	53	33	0	53	60
7	Grimes	LitIntro	BE	48	42	55	52	29	6	68	71
8	Beaver	Religion	MU	44	44	56	11	22	0	44	44
9	Thompson	PsychSem	BE	27	33	73	33	53	13	40	47
10	Myers	PhilIntro	BE	42	39	42	42	29	6	55	55
11	Burk	HistUS	MU	33	43	43	29	28	1	60	63
12	Cole	EngComp	BE	26	35	41	44	41	3	63	67
13	Wahlstrom	LitBrit	HE	33	6	44	28	28	6	61	72
14	Gore	ChemOrgan	HE	29	14	29	36	29	7	64	50
15	Avg/Item	Avg/Item	Avg	33	30	41	34	29	5	51	56
16	Porada	PsychExpr	HE	29	41	53	47	35	6	41	41
17	Siferd	LitAmer	HE	29	21	29	29	36	14	50	50
18	Aker	IntergisCulture	HI	25	50	50	25	25	0	13	75
19	Kappel	HistWCiv	BE	31	25	28	27	15	13	50	58
20	Brenz	EngComp	MT	29	52	32	26	6	16	45	55
21	Buckey	PhilIntro	MT	42	26	32	26	26	0	53	47
22	Bing	Politics	HE	24	24	29	18	18	12	41	53
23	Jones	AcctINT	OT	1	2	35	30	30	0	50	50
24	Reyer	Eng	HE	24	24	42	36	18	15	39	39
25	Aker	EconMicro	HI	25	30	55	45	35	0	30	50
26	Nelson	FrenchI	BE	16	11	26	32	32	0	58	33
27	Horning	EconINtro	MT	18	27	28	16	16	4	47	33
28	Bailey	Lit	OT	9	19	13	23	27	0	67	52
29	Jones	AcctIDI	OT	17	0	0	1	55	0	50	55
30	**Name**	**Course**	*College*	Item1	Item2	Item3	Item4	Item5	Item6	Item7	Item8
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1	1120	1511	941	1186	1098	1327	1563	1074		
2	1025	1341	825	1125	995	1196	1419	965		
3	17	92	83	17	92	75	100	58		
4	64	73	64	64	27	81	73	56		
5	63	88	50	88	50	38	88	56		
6	86	73	13	86	53	73	73	54		
7	48	68	6	53	74	71	87	52		
8	78	78	33	44	11	56	44	51		
9	86	64	0	79	43	53	87	49		
10	70	74	29	70	39	71	61	48		
11	28	63	48	45	55	63	65	44		
12	62	65	3	45	26	53	73	43		
13	33	72	61	44	44	44	74	43		
14	7	64	86	21	71	57	71	42		
15	43	58	36	46	42	51	60	41		
16	6	47	29	53	53	53	76	41		
17	43	57	43	14	64	57	57	40		
18	63	63	0	63	38	75	38	40		
19	26	51	50	41	53	44	44	37		
20	39	58	6	58	16	55	68	37		
21	68	58	37	42	32	47	5	36		
22	47	59	6	53	35	65	47	35		
23	50	60	1	35	50	40	85	35		
24	45	48	12	52	36	39	42	34		
25	35	25	40	25	28	35	30	33		
26	5	42	84	44	16	26	21	30		
27	24	45	31	31	16	37	59	29		
28	9	23	59	19	23	18	50	27		
29	18	1	67	0	25	1	45	24		
30	Item9	Item10	Item11	Item12	Item13	Item14	Item15	Avg/Prof		
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APPENDIX G

Faculty Response to Project Activities

EAST CENTRAL COLLEGES
Heidelberg College
Tiffin, Ohio 44883
(419) 448-2047

ECC Questionnaire on Critical Thinking

The purpose of this questionnaire is to assist planners for a week-long workshop on critical thinking, to be held June 12-17, 1988, probably at Bethany. The workshop will be held for 26 ECC faculty who have not yet participated in the critical thinking project.

1. Rank order the factors which were most important to your success on the critical thinking project. 1 is most important; 3 is least important. Add brief explanatory comment, if needed.

____ a. choice of course to revise

1 - 11 2 - 10 3 - 6

____ b. outside consultants

1 - 7 2 - 12 3 - 11

____ c. presentations by colleagues on other ECC campuses

1 - 3 2 - 19 3 - 8

____ d. critique of syllabus by outside consultant and by colleagues

1 - 17 2 - 9 3 - 2

____ e. individual reading

1 - 9 2 - 15 3 - 2

____ f. discussions of reading with colleagues

1 - 16 2 - 7 3 - 7

2. Whose description of cognitive growth was most valuable for you and why?

23 Perry 20 Kolb 5 Kohlberg

9 Gilligan 2 Belenky 4 Knefelkamp

7 other

McCarthy, Kegan, Gardner, Piaget, and 2 for Bloom

3. List authors and books or essays most valuable to you and to teammates. Annotate, if you can.

List authors and books or essays most valuable to you and to teammates.

Alverno articles on assessment.

Rudolf Arnheim. Visual Thinking.

Mary Belenky. Women's Ways of Knowing.

Allan Bloom. The Closing of the American Mind.

Wayne Booth. Modern Dogma.

_____. The Rhetoric of Assent.

Edward D'Angelo. The Teaching of Critical Thinking.

Edward DeBono. Lateral Thinking.

Riane Eisler. The Chalice and the Blade.

Howard Gardner. Frames of Mind.

Norman Holland. The I.

David Kiersey and Marilyn Bates. Please Understand Me.

Bernice McCarthy. 4 MAT Books.

McPeck.

Ulric Neisser. Cognition and Reality.

Perry articles.

Piaget.

Michael Polanyi. Meaning.

Robert Scholes. Semiotics and Interpretation.

Hyemeyohsts Storm. Seven Arrows.

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APPENDIX H

A Selection of Journal Abstracts and Course Syllabi

--Martin Huehner, Invertebrate Zoology, syllabus and abstact

--Stephen Zaber, Microeconomics, syllabus and abstract

--Arthur Murdoch, The Nature of Science, syllabus

--Robert Myers, Introduction to Philosophy, syllabus

--Nancy Siford, American Literature, syllabus and study guide

--William Royer, Value-Focused Writing Course, abstract & course outline

--Marilyn Schultz, Human Growth and Development, abstract

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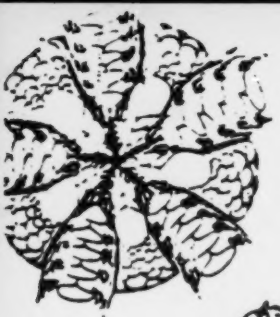
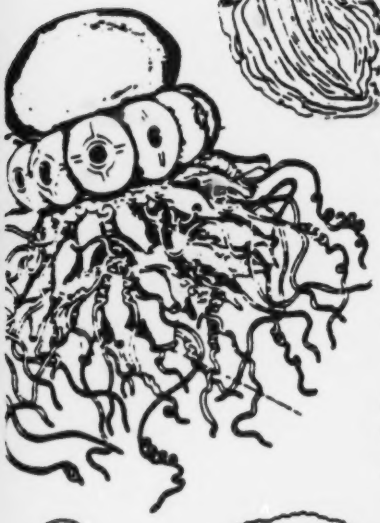
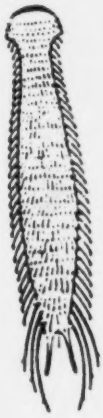


INVERTEBRATE ZOOLOGY (BIOLOGY 320)

SYLLABUS

Instructor: Dr. Martin Huehner
Colton 314; ext. 266

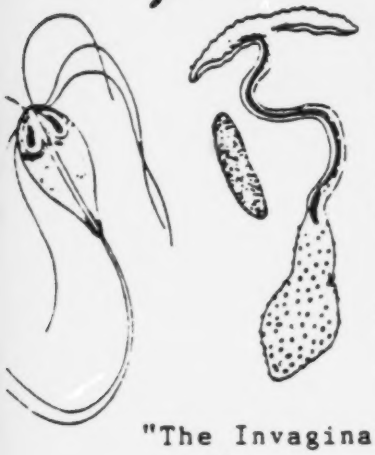




A giddy little *Gastrula*, gyrating round and round,
Was thought to show the way we got our enteron profound:
A little whirlpool in its wake maintained a tasty store,
A pocket sank to lodge it all, and left a blastopore.

As a larval epigram this description earns a prize,
But as sketching adult ancestry can only win surprise,
And when you note all early orders fixed upon the rocks,
You feel a slight embarrassment, the first of many shocks.

The foremost inconsistency is the simple, solid fact
That the Hydrozoan larva, the mouthless *Planula*, is packed
With a jumbled mass of gastric cells that drop in, slow or fast,
And show no slightest cavity till the larval stage has passed.

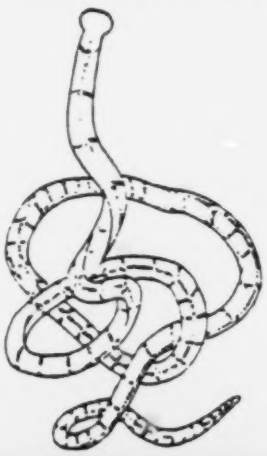
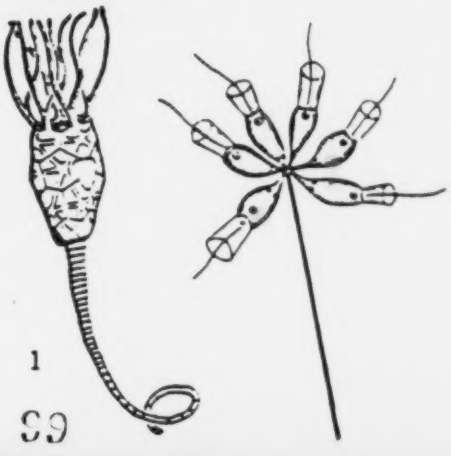


The larva then becomes attached, and shortly stands erect,
Nourished by the yolky stores the inner cells eject:
Their shrinkage leaves a growing space, the early enteron,
Round which a layer of cells remains, and lines the outer one.

Some tentacles are sprouted then, say 2, then 4 and 8,
And not till all is ready does the mouth break through quite late.
If mouth and gut arose at first from one invagination,
What roundabout procedure's here! What needless complication!

Invagination surely is a thing of later date—
Procedure speeded up to suit the embryonic state:
The cells as loose irregulars build up the lower grades,
And yield but slowly, step by step, to organised brigades.

"The Invaginate Gastrula and the Planula" by Walter Garstang

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INVERTEBRATE ZOOLOGY (BIOLOGY 320)

Instructor: Dr. Martin Huehner
Colton 314; ext. 266

COURSE RATIONALE: The 33 existing animal phyla, with the exception of one modest subphylum (vertebrata), are all composed of invertebrates. These animals are not only the most numerous on this planet, but also display the greatest diversity of structure, behavior, physiology, development, and evolution. Their fossil record spans well over a billion years and during this time many different strategies for survival have evolved with varying successes. The purpose of this course is to examine these survival strategies for each phylum and within each phylum. We will also examine how the different phyla are related to one another, and how the animals comprising a single phylum are related. Such relationships can only be understood in terms of evolution, which is often interpreted from developmental studies, as the above poem indicates. Much of our energy will be devoted to unravelling the riddles posed by present day and fossil organisms' structure, developmment, ecology, etc. Since many invertebrate groups are marine this course has a strong marine component and provides a good introduction to marine community ecology.

COURSE GOALS: Your performance in this course will be determined on how well you meet the following three criteria:

1. FACTS: The factual material involved in this course is immense. Learning classification and body structures, etc. will comprise most of the factual material you will learn. You will be expected to not only recognize the factual information, but also to use it to build concepts. Your understanding of concepts is only as good as your understanding of the factual material out of which these concepts are made. The factual component of this course will increase your overall biological VOCABULARY considerably. Much of the laboratory will be heavily oriented toward factual material but lecture tests will also evaluate your knowledge of this information.

2. SKILLS: These will range from capturing organisms in their natural environment to dissection technique and identification. You will learn how to prepare specimens for a research collection and how to use a variety of different collection and preservation techniques. Your skills will primarily be evaluated on the basis of your collection and lab performance. Other skills on which you will be evaluated are organization and speech (paper presentations) and analytical thinking (lecture and lab exams).

3. CONCEPTS: In this course, you will learn not only about invertebrates, but also about how to use structural, developmental, anatomical, etc. information (facts) about invertebrates to produce comparisons of various animal groups or

evolutionary trends. An extensive field of facts must be synthesized into a meaningful pattern of concepts to accomplish this task. One of my goals in this course is to teach each of you how to use accurate factual material to build concepts. Some of these concepts or theories are based on factual material which can, however, have more than one interpretation. For example, one of the most important aspects of animal evolution is that insufficient information exists to unequivocally classifiy many groups and we may have no hope of ever gaining this information. Therefore more than one logical proposal may be acceptable as an interpretation of the underlying facts. This is not to say, however, that any interpretation is valid; only those which adequately address known facts are acceptable. Through a process of logical analysis of facts, you will be asked to develop conceptual classification or evolutionary proposals. During lecture, I will frequently ask questions requiring logical analysis of facts for an answer. Pay attention to these - they are actual training for future exam questions and real life situations in your future careers. You will be expected to participate in class discussions based both on my questions and those you bring to class from readings, lab, or field work. Your conceptual abilities will mainly be tested by essay questions on lecture exams.

EXPECTATIONS: Since all students in this class are upper level biology majors, I expect your approach to be scholarly. This means that you should view this course as an important step in developing your career as a biologist, Treat your texbook, lab manual, class notes, etc. as reference materials which will continue to be valuable to you long into the future. Realize now that your present exposure to the subject matter in this course may be your last before you are expected to teach or otherwise use it in your work. I hope that you to view this course as an opportunity to learn and grow and not as another requirement to "get through".

ATTENDANCE: I expect that you ATTEND ALL CLASS, LABORATORY, AND FIELD SESSIONS. Makeup exams will not be given except in the most dire of circumstances. Late assignments will be downgraded.

ITEMS NEEDED: Each of you will need a good dissecting kit for this course and for your future as biologists. These are available at the bookstore or can be custom assembled and ordered through the Biology Department Office. Books you will need are:

Invertebrate Zoology by Pechenik
Invertebrate Zoology Laboratory Manual by Beck and Braithwaite
A Field Guide to Insects by Borrer and White
A Field Guide to the Atlantic Seashore by Gosner

Collection equipment will be provided for each of you.

EVALUATION AND GRADING:

2 lecture exams at 100 points each	200
1 comprehensive final	200
2 lab exams	200
paper presentation	50
field notebook and collection	150
TOTAL	850

Class participation will also be important in determining your final grade since it can raise a borderline grade.

TENTATIVE SCHEDULE

WK./DATE	TOPIC	READINGS
1 9/15	Principles of Phylogeny	Chapters 1 and 2
16	" " "	" " " "
18	Major Invertebrate Groups	Handout
19	" " "	"

LAB: Tuesday - Collection instructions and techniques
Friday - Collection trip

2	9/22	Protozoa: Sarcomastigophora	Chapter 3
	23	Protozoa: Ciliophora & Misc.	"
	25	Origin of multicellularity in animals	
	26	Sponges: Multicellularity without tissues	Ch. 4

LAB: Tuesday - River invertebrates - Cuyahoga River
Friday - protozoans

3	9/29	Sponges, Cont.	Chapter 4
	30	Cnidarians	Chapter 5
	10/2	**EXAM 1**	
	3	LEAVE FOR DUML	

week 4 - Duke University Marine Lab activities

	Cnidarians, Cont.	Chapter 5
	Ctenophorans	Chapter 6
	Platyhelminthes	Chapter 7
	Individual projects - see handout	

10/8 - RETURN TO HIRAM - arrive 10 PM
10/9 and 10/10 - NO CLASS

5	10/13	Mesozoans, Gnathostomulids	Chapter 9
	14	Nemertina	Chapters 10, 11
	16	The Pseudocoelomates	"
	17	" "	

LAB: Tuesday: Pseudocoelomates
Friday: Annelids

6	10/20	Annelids	Chapter 12
	21	"	"
	23	Annelid relatives	Chapters 13, 14
	24	" "	"

LAB: Tuesday - Review
Friday - **LAB EXAM 1**

7	10/27	Mollusca	Chapter 15
	28	"	"
	30	"	"
	31	"	"

LAB: Tuesday - Mollusca 1
Friday - Mollusca 2

WK/	DATE	TOPIC	READINGS
8	11/3	Arthropod evolution	Chapter 17
	4	"	"
	6	Arthropods	Chapter 16
	7	**EXAM 2**	

LAB: Tuesday - Chelicerate Arthropods
Friday - Mandibulate Arthropods

9	11/10	Lophophorate Phyla	Chapter 18
	11	"	"
	13	Echinodermata	Chapter 19
	14	"	"

LAB: Tuesday: Lophophophorates
Friday: Echinoderms

10	11/17	Chaetognatha	Chapter 20
	18	Hemichordates	Chapter 21
	20	Chordates (Urochordata)	Chapter 22
	21	"	"

LAB: Tuesday: **LAB EXAM**
Friday: COLLECTIONS DUE

Final exams will only be given during their scheduled time.

Invertebrate Zoology Field Exercises

The intent of the field component of this course is to familiarize you with where and how invertebrates live. You will be experiencing the various invertebrates will many of your senses and will develop strong impressions of your encounters. Biology 320 has a strong field component which is structured to provide each of you with many opportunities to become familiar with terrestrial, marine, and freshwater invertebrates. The following trips have been arranged to accomplish this:

1. Insect habitats and behavior: Field Station
2. Fluvial invertebrates: Cuyahoga River
3. Piling Community - Duke U. Marine Lab
4. Mud flat community - DUML
5. Shallow water open ocean community (trawling)
6. Shallow water estuarine community
7. Plankton community study

To aid in your retention of these important experiences, you are required to keep a field notebook which documents your observations. The field notebook has several goals. First, it will require that you take the time to make detailed observations, reflect on their significance, and then commit them to writing. The mental processes involved in such an exercise will undoubtedly raise questions which should be shared with the rest of the class. To facilitate this exchange of questions and ideas, each field trip will be followed by an informal discussion session. You will find that listening to other's points of view and observations is valuable and actually is part of the process of scientific inquiry.

Many of you have learned observation skills of sorts from other courses or on your own. As a guideline for you for Biology 320, you should always include the following information in your field entries:

1. general character of the environment. Include descriptions of vegetation, substratum composition, water movement, exposure to solar radiation.

2. List animals present. They need not be identified to species.

3. Make observations of the animals. Include distribution, abundance, mobility, relationship to vegetation and physical structures (i.e. old shells, rocks) behavior, etc. Try to describe the animals in each environment as accurately as possible.

Specific instructions and methods will be given before each field trip. Some of the methods require special equipment which will be provided.

INVERTEBRATE ZOOLOGY FIELD SHEET

HABITAT DESCRIPTION

1. general:

2. water conditions (depth, waves, current, turbidity, salintiy):

3. substratum:

4. other:

Animals Present and Abundance, Distribution, Mobility, Behavior:

INSTRUCTIONS FOR COMPLETING YOUR INVERTEBRATE ZOOLOGY COLLECTION

The collection required for Biology 320 is designed to familiarize you with common invertebrates of terrestrial, marine, and freshwater habitats. It will be done in conjunction with the field exercises in that the collection will be ecological in emphasis. By successfully completing the collection, you will accomplish the following:

1. investigation of and familiarization with a diversity of ecological habitats.

2. familiarization with proper identification and classification of invertebrates.

3. development of proper capture, fixation, storage, and labelling techniques.

4. appreciation of the diversity and importance of invertebrates in natural ecosystems.

Each specimen should be identified and neatly labelled. An overall inventory sheet provided should accompany each collection. Organisms in the collection should be complete and without missing parts. Specific instructions will be provided on how to preserve insects as well as other invertebrates. Generally, soft bodied forms are preserved in 70% alcohol. Those with shells (e.g. molluscs) can be preserved by removing soft parts by boiling. See your instructor or your field guides for specifics.

Labels accompanying the specimens must include the following information:
1. clasification
2. locality and habitat - e.g. - Beaufort, N.C.; Mud Flat
3. date of collection
4. your name

The size of the collection should not be excessively large. Here is a guide as to what should be included minimally:

Porifera	1
Cnidaria	3 from 3 classes
Bryozoa	1
Annelida	3 from 3 classes
Mollusca	3 from 3 classes
Arthropoda	
Crustacea	1 freshwater
	1 marine
	1 terrestrial
Diplopoda	1
Chilopoda	1
Arachnida	2 from 2 orders
Insecta	20 from 10 orders

Echinodermata	2 from 2 classes
Hemichordata	1
Chordata	1

total = 42

COLLECTION GRADING

Collections will be graded on the following criteria:

1. Completeness: all required specimens and areas are represented.

2. Accuracy: specimens should be properly identified to species level. Your label should also include Class, Order, and Family names.

3. Neatness: be sure your specimens are properly preserved, neatly presented, and orderly arranged.

4. Number of specimens: No maximum number of specimens will be assigned, but the minimum to receive a "C" grade is listed above.

- for a "B" - 55 specimens

- for an "A" - 70 specimens

Specimens above the 42 minimum do not need to be identified to the species level. Genus, Family, or Order identification will be adequate.

INVERTEBRATE ZOOLOGY COLLECTION INVENTORY SHEET

(*) indicates required specimens; (-) indicates additional specimens

Porifera

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Cnidaria

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Bryozoa

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Annelida

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Mollusca

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Crustacea

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Diplopoda

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Chilopoda

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Arachnida

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Insecta

1*

2*

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7*

8*

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11*

12*

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16*

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5-

6-

7-

8-

9-

10-

11-

Echinodermata

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Hemichordata

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Chordata

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Miscellaneous

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Invertebrate Zoology (Biology 320) Journal Summary

FIPSE Critical Thinking Project, Fall 1986

Martin Huehner, Hiram College Biology Department

Week 1. Although I spent a long time going over the expanded syllabus, I feel that I have never done a more thorough and clear job of presenting what the course is about. This is the first time I have not used a student teaching assistant and I'm finding the labs very rewarding in that my years of experience can be brought to bear in a very rewarding way here.

Week 2. I have never taught a class in this manner before. I make the students talk, explain, etc. the subject matter and I add what is necessary to round out the discussion. My students have been coming to class prepared but it is easy to see that they have difficulty providing generalizations about animal groups. Prompting them with more specific questions that lead up to overviews helps. More time is needed to cover the material and I do not get around to talking about some of the more exotic peripheral issues. I'm enjoying the class as I never thought I would.

Week 3. This week we left on our field trip to Duke University Marine Lab. The experience at DUML was great! Small class size meant that we could all do everthing together. We could share all the questions, experiences, and information. We discussed, in depth, piling and sand flat communities. The discussion of each was rewarding in that we could compare the two, find similarities and differences, and talk about the biology of each of the organisms we found there. The students enjoyed it and we all learned something. This is definitely something to keep in the

program. I'll need to find time to do the rest of the habitats also or maybe just settle for doing two or three really well. One evening, the students even spontaneously began a discussion session in which we looked at the differences and similarities between colonial cnidarians, ctenophorans, bryozoans, and other lophophorates.

Week 5. Midterm burnout? Performance is dropping off in class. I am thinking about how to make the students pay more attention to preparation for class discussions. I've had to talk to them about coming more prepared, but maybe using lab time to cover necessary material will make up for their slow coverage of it themselves. This inconvenience may spur more preparation and a desire to use class time efficiently. I passed back the tests. No one did poorly (79 - 92% range) but only 1 received an A (low). I made specific notes on papers and gave some examples about how the questions could have been answered better.

Week 6. One day I went in to class, had some question/ answer time, and then gave then 5 minutes to coordinate their presentation of a phylum of animals. This stimulated a group effort and started them thinking about fundamental characteristics.

Week 7. I have been spending lots of time in reinforcing how a biologist states the salient characteristics of a group of organisms, something the class has been slow to pick up. Apparently a developmental period of repitition and practice is required before full realization of what is important and what is not can be expected.

Week 9. From the kind of performance I have been observing in

lecture and lab, my class is apparently made up of a wide span of Perry types. One is a 4+, without question, and his class presentation showed great skill and integrative comprehension. He was a better lecturer than quite a few Ph.D.'s I have heard. One class member is definitely much more comfortable with facts and the "broad picture" leaves her disoriented. The other three students are closely matched: hard workers, attentive, and can do integrative work but not often with "grace".

Week 10. During the last class session, the students and I had an informal discussion about the course. Both strong and weak points were examined, and here are the results:

- The students overwhelmingly preferred discussion sessions to traditional lecture. They explained that they enjoyed being active much more than being passive. I suppose this has merit since traditional lecture format may foster intellectual passivity, while a discussion approach stimulates intellectual growth. I think this is one of the most important insights I have gained from the FIPSE program. It will be very difficult for me ever again to teach a course in strict lecture format.
- The students said they found studying together very beneficial in that when they addressed a problem together, less was overlooked. The nature of the class (5 students) made for a lot of togetherness in this respect.
- The students were emphatic about the positive benfits of slides to augment lab or lecture topics, and about pictoral handouts. They felt that these were valuable because they helped to explain things better.

A. As a **faculty development** experience, this project was excellent. It helped me to view teaching in my discipline from a fresh perspective and developed new enthusiasm for teaching as the primary component of my profession. Unfortunately, I found our discussions on campus to be frustratingly unfocused and unproductive compared with the workshops. I think that having the 1987 participants attend the Feb. workshop is a good idea.

B. As a **course development** experience, I found that my revision was done in a meaningful way that was not just trail and error. The course itself is now much better planned and its different components are more meaningfully interwoven. The methods I employed in revamping my Invertebrate Zoology course also provided stimulus and encouragement for students to develop **critical thinking** skills (see journal remarks). In summary, this has been the most valuable experience relating to my profession that I have had my 11 years of college teaching. It not only helped me to understand students, but also myself as well.

(ORIGINAL IN COLOR)

HIRAM COLLEGE

Principles of Economics
~~Microeconomics~~
Stephen L. Zabor

Economics 201 Fall, 1985-86

This course provides an introduction to economics and a survey of the principles and applications of Microeconomic Theory. The study of economics involves the analysis of choice among alternative uses of limited resources. The fundamental economic problem is the fact that no society has enough resources to satisfy all of the wants of its members. Consequently, every society must decide WHAT is produced with its limited resources, HOW it produces the desired goods and services, and WHO receives the benefits of the production process. Most economics courses consider important social issues - unemployment, inflation, deficit spending, productivity, import restrictions, pollution, energy shortages, poverty - from society's point of view, not the individual's.

While society's point of view is emphasized it must be realized that you, as an individual, make economic choices that affect you personally every day. When you decide to pay your tuition, to accept a job, to skip breakfast, to buy a tape, or to study more you have, hopefully, employed problem solving skills which are relevant to the analysis of society's economic issues. Furthermore, by studying economics you will develop a powerfull tool of analysis which will be useful in your everyday life.

We will try to disentangle and make sense of the complex web of economic interdependencies surrounding us. The course is designed to give non-majors a good understanding of the world around them, to see the causes and consequences of human social interaction in economic settings, and to anticipate the future consequences of current action. Majors in Management and/or Economics will gain skills which will be useful in upper level courses.

Throughout the course we will concentrate on the definition of key terms and concepts, the description of important economic relationships, the explanation of these relationships, and the application of the theory. Definitions are fundamentally important for we must be able to communicate clearly and concisely about economic events. Descriptions of relationships will consist of the direction of causation and the impact of change in one variable on the value of another. These descriptions will be provided in four alternative and equivalent ways. I will decribe a relationship using words, graphs, equations, and charts. Regularly during the course applications of the relationships will be emphasized. Frequently articles in the Wall Street Journal, The Cleveland Plain Dealer, or one of the weekly news magazines will be discussed to highlight the importance of the relationships being discussed and to see how they can be applied in new ways. You can find current copies of these sources in the library or you may subscribe to the Wall Street Journal by signing up in class. Finally, we will consider why the economic relationships are likely to be true. The ability to clearly and logically analyze an economic relationship is critical to being able to make economic decisions.

 BEST COPY AVAILABLE

COURSE REQUIREMENTS

I expect you to have carefully read the material listed below for each class period. Although each chapter is short, you must master the language and the logic of the theory. Economics is a rigorous subject and must be studied with an eye for detail. You should note any questions you have about the reading material and should come to class prepared to discuss and apply the concepts developed in the text. Whenever you come to a "Checkpoint Question" in the text you should write an answer before looking at the answer in the book. It is highly recommended, though not required, that you do the study guide each day before class. I suggest that you write your answers on a sheet of paper rather than in the study guide so you may re-examine your understanding before a test. I will encourage your use of the Study Guide by providing opportunities in class to discuss some of the exercises.

Class participation, though not given an explicit weight, will influence borderline grade decisions. Opportunities will be given in class to ask and to respond to questions. In addition, on several occasions the class will be broken into smaller units to discuss and analyze important economic questions. These discussions will then be shared with the class. Each individual's contribution to these discussions will be evaluated.

Each class will begin with an opportunity to ask questions. You may ask questions about the previous class, the reading for the day, or current events. We will then cover the reading for the day. Classes will include lectures which will highlight important and particularly difficult concepts, question/answer opportunities, and discussions involving the entire class of small groups. We might conclude the class with consideration of Study Guide questions and with the questions at the end of the chapters. Finally, a preview of the next class and an indication of how the new material relates to the material just discussed will be given.

There will be three examinations during the quarter in addition to the scheduled final. Each examination will contain questions which will require you to define important terms and concepts, to describe in your own way an economic relationship, to apply these terms, concepts and relationships, and to explain why a particular rule or relationship is correct. The four tests will be approximately equal in weight. Each examination, including the final, will be designed to cover the material read and discussed since the previous examination. However, I must stress that an understanding of the material covered during previous sections of the course is critical to your ability to perform on the second, third and final examination.

TEXTS

Economics, Third Edition, by Roger Waud, and
Study Guide to Accompany Economics, Third Edition, by John Weiler

OFFICE HOURS

Please feel free to contact me about any questions or problems you might have. I will be in my office during the posted hours. If you cannot make it to my office during these hours, please make an appointment for some mutually convenient time.

Office: Hinsdale 115
Phone: 569-5(141)
Hours: M, T, Th, F 10:00 - 11:00 and 2:00 - 3:00

ADDITIONAL HELP

Additional help can be secured in two ways. I have created a tutorial computer program to aid individuals who need help with the basic mathematics employed in this class to express economic relationships. Access to the program is attained by typing RUN ECON:PRINCE on a terminal connected to the VAX 11/780. I have a handout available to assist you in using this program. If you need to acquire a computer account and/or need special assistence please contact me. In addition, a tutor will be available during the week. I will announce the individual's name and his/her hours in class. Please contact me before seeking help elsewhere. It helps to have a good understanding of the class's progress.

TENTATIVE READING SCHEDULE - 1

During this first section of this course we will consider the nature of the basic economic problem: the inability to satisfy all human wants given limited resources. We will discuss the four basic features of all economic systems: the decision-making process, property rights, incentives to performance, and the mechanism for providing information and coordinating activities. Although emphasis will be placed on laying the groundwork for the study of our economic system, we will also review how other systems are organized. Finally, we will ask ourselves how we would evaluate the performance of an economic system.

What is Economics?
Sept. 15 Intro
16 Ch. 1

The Fundamental Economic Problem: Scarcity and Choice
18 Ch. 2

Alternative Social Responses
19 Ch. 3
22 cont.
23 Ch. 34

Market Analysis: Supply and Demand
25 Ch. 4
26 cont.
29 review
30 Exam 1

A tentative reading list for the second section of the course will be distributed during the first examination.

Principles of Economics
Microeconomics
Stephen L. Zabor

Economics 201 Fall, 1985-86

Office: Hinsdale 115
Phone: 569-5(141)
Hours: M, T, Th, F 10:00 - 11:00 and 2:00 - 3:00

ADDITIONAL HELP

A tutor will be available on Sunday evening from 7-9. Jim Malz, a senior economics major with tutoring experience, will be in Hinsdale 114. Please feel free to contact me before you talk with Jim.

TENTATIVE READING SCHEDULE - 2

During this second section of this course we will consider another dimension of the relationship between price and quantity demanded: the elasticity of demand. In addition, we will study the theory of consumer choice and begin our study of the behavior of individual business organizations. We will examine the nature of cost of production as it relates to output and conclude this section of the course with an analysis of a firm's price/output decision when it is confronted by many existing and potential competitors.

Consumer Behavior and Elasticity		
Oct.	2	Ch. 19
	3	Ch. 19/20
	6	Ch. 20
Production and Cost		
	7	Ch. 21
	9	Ch. 21
Perfect Competition		
	10	Ch. 22
	13	Ch. 22
	14	review
	16	Exam 2
OCT.	17	CAMPUS DAY

DEFINITIONS AND MORE

ECONOMICS
is the study of the way we may choose among alternative uses of scarce resources. (Page 4)

SCARCITY
exists when the quantity people need or would like to have (at a zero price) exceeds the quantity available. (Page 5)

The OPPORTUNITY COST
of a chosen activity is the foregone value of the best available alternative. (Page 25)

The LAW OF INCREASING COST
says as production rises the opportunity cost of producing another unit generally increases. (Pages 29 and 30)

The LAW OF DIMINISHING RETURNS
indicates that as one input is added to a fixed amount of another eventually the increase in output will fall.

A MARKET
is an economic institution in which buyers and sellers come together for the purpose of voluntary exchange. (Page 39)

NORMAL PROFIT
is the minimum payment for financial capital and entrepreneurial skills necessary to maintain its current use. (Page 48)

MARKET DEMAND
The quantities of a good or service people are willing and able to purchase at each and every price during a given time period. (Page 64)

MARKET DEMAND
depends upon the prices of other goods and services, income and wealth, tastes, expectations, income distribution, and the number of buyers (market size). (Page 66+)

MARKET SUPPLY
The quantities of a good or service people are willing and able to sell at each and every price during a given time period. (Page 70)

MARKET SUPPLY
depends upon the prices of related goods (profits elsewhere), price of inputs, expectations, technology, competition (the number of potential competitors). (Page 73+)

A SURPLUS (SHORTAGE)
exists when quantity demanded is less than (greater than) quantity supplied. (Page 78)

DEMAND ESTIMATION TECHNIQUES
1. Controlled Market Experiments
2. Consumer Questionnaires
3. Cost-Saving Estimates
4. Correlation Analysis

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KEY CONCEPTS - ONE

DEFINITIONS AND EXPLANATIONS

DEFINITIONS

The American Heritage Dictionary defines the word define in the following manner: "To state the precise meaning of a word."

As you learn economics you will be required to memorize the definitions of key words and concepts. Precision will be fundamentally important. This means a definition must be short, to the point and inclusive. Our ability to discuss economic issues will be greatly enhanced when each of us knows and accepts a common meaning of key terms and concepts. Many of the definitions you will learn during this course highlight and isolate an important relationship between economic variables.

DESCRIPTION

The same dictionary defines describe as "to tell about in detail."

Hence one difference between a definition and a description will be the amount of detail. A definition will be precise, catching the essence of the word, while a description will give a more detailed statement of the word or concept being considered. The description of a relationship between two variables will at least indicate whether the relationship is a positive or a negative one. In addition, if there is a clear causal relationship the description will state which is the independent variable and which the dependent. Finally, the description might specify the strength of the relationship, its slope, and whether or not the slope changes as the value of the independent variable increases.

Descriptions can be any of four equivalent forms. They can be verbal, graphs, charts, or equations. Each complete description, regardless of form, provides the same information about the relationship in question.

EXPLANATION

Finally, my dictionary indicates that explain means "to offer reasons for."

Explanations cannot be a rewording of the stated relationship, or an equivalent explanation. It is necessary to discuss the logic of and the reasons for the causal relationship indicated. Typically it is necessary to discuss the considerations of the relevant economic agents as they strive to achieve their goals. An analysis of the reaction of the economic agent to a change in his/her/its economic environment will provide an explanation of the likely response.

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KEY CONCEPTS — TWO

DEFINITIONS AND EXPLANATIONS

DEFINITION — PRODUCTION POSSIBILITIES

The maximum possible output combinations of goods that can be produced, given the available resources and existing technology.

This statement identifies the meaning of the phrase "production possibilities." Knowing this definition will enable effective communication. Each time we want to refer to the maximum output of goods and services that can be created we can simply say "production possibilies." Implicit in the definition is the notion that there are limits to the output of goods and services, but the nature of the relationship is not specified. It could be positive or negative. Thus far we have only created a part of a language. We have identified what economists consider to be an important concept and given that concept a name.

DESCRIPTION — THE PRINCIPLE OF INCREASING COSTS

The maximum levels of two goods are negatively related. As the output of one good increases the maximum level of output of the other good necessarily decreases. Furthermore, the opportunity cost of producing another unit increases as the level of production expands.

We have now identified the suspected nature of the relationship between production possibilities for several goods/services. When the economy, or individual economic unit, is operating efficiently and is employing all of its resources output of one or more goods/services must be reduced in order to expand the output of another good or service. If the principle is correct then we will better understand the nature of economic decision-making, that sacrifices must be made in order to accomplish a goal.

EXPLANATION

The principle of increasing cost is likely to be true because:

1. Resources available to be used are scarce. We simply do not possess an unlimited quantity of the resources necessary to produce desried goods and services. Thus, in order to produce more of one good resources must be released from the production of another good or service. This requires that output of the other good or service must be reduced.

2. Due to the law of diminishing returns and due to the existence of specialized resources the reduced production of other goods and services must get larger as the output of the desired good increases.

These two points give good reason for the principle of increasing cost. They give support to the notion that production possibilities are limited and that the opportunity cost of expanding production of one good increases as its output increases. When we have identified a goal we wish to acheive it is necessary to understand why relationships are true in order to develop an effective policy. Explanations cannot be a rewording of the stated relationship, but must go under the surface to give cause for accepting the truth of the relationship.

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KEY CONCEPTS — THREE

DEFINITIONS AND EXPLANATIONS

DEFINITION -- DEMAND

Demand is the quantities of a good or service people are willing and able to purchase at each and every price during a given time period.

This statement identifies the meaning of the word "demand." When we all know this definition we will be able to effectively communicate. Each time we want to refer to the relationship between price and quantity demanded we can simply say "demand." Implicit in the definition is the notion that there is a relationship between price and the quantity demanded, but the nature of the relationship is not specified. It could be positive or negative. Thus far we have only created a part of a language. We have identified what economists consider to be an important relationship and given that relationship a name.

DESCRIPTION - THE LAW OF DEMAND

Price and quantity demanded are negatively related. When price increases the quantity people are willing and able to purchase will decrease.

We have now identified the suspected nature of the relationship between price and quantity demanded. We feel that it is so likely that quantity demanded will decrease when price increases that we are willing to call it a "law." This does not help us understand consumer reactions to the change in price, but it does specify what the reaction is likely to be. If the law is correct then we will be able to predict consumer reaction to a change in price -- assuming no other determinant of quantity demanded changes.

EXPLANATION

The law of demand is likely to be true because:

1. When the price of a good or service increases the amount of other valuable economic goods which must be given up increases. Thus it is likely that a consumer will decide that the last unit purchased is not worth the higher sacrifice. This is the substitution effect.

2. When the price of a good or service you purchase increases you will not be able to purchase the same goods and services unless your income increases. This is the income effect.

These two points give good reason for the law of demand. They give support to the notion that price and quantity demanded are inversely related. When we have identified a goal we wish to acheive it is necessary to understand why relationships are true in order to develop an effective policy. Explanations cannot be a rewording of the stated relationship, but must go under the surface to give cause for accepting the truth of the relationship.

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KEY CONCEPTS — FOUR

(ORIGINAL IN COLOR)

DEFINITIONS AND EXPLANATIONS

DEFINITIONS -- OPTIMIZATION (MAXIMIZATION)

Optimization (maximization) occurs when resources are being used in the best possible manner.

Much of economic theory deals with the individual's, or society's, attempt to derive the greatest benefit from the use of the available resources. As previously defined, economics is the study of the way we may choose among alternative uses of scarce resources. Because resources <u>are scarce</u> we are forced to make choices. Economists postulate that people are rational in that they make decisions based on what is best for them. Thus, we (economists) make frequent use of the terms optimal, optimize, maximum, maximize.

DESCRIPTION -- OPTIMIZING RULE

Resource use will be optimal when there is no way to get greater value from the resources being employed. This will occur when the benefit from an increase in an activity (the marginal benefit) no longer exceeds (is equal to) the opportunity cost of that increase (the marginal cost).

It seems almost intuitively obvious to say that resources are not being used best when there is a way to increase the well-being of the decision maker. This rule may be applied to many situations. Consumption, work and leisure decisions, input use, and output decisions are all subject to this rule. We need only identify all of the benefits which accrue to the decision making unit from expanding an activity and all of the costs (the opportunity costs) to indicate when resources are being employed optimally.

EXPLANATION

Whenever the marginal benefit exceeds the marginal cost the decision maker should expand the activity because additional resources generate greater value in this use than is lost when the best alternative use is foregone (sacrificed). Because the total benefit increased more than the total cost did, the difference between the two, the net gain to the decision maker, is increased. This will occur as long as the marginal benefit (MB) exceeds the marginal cost (MC).

This is a modest attempt to connect the concept of optimization with the rule that MB should equal MC. One must attempt to give some explanation, some causal relationship between MB = MC and the concept of optimizing. Often I believe the attempt to formalize this concept takes the obvious and makes it obscure. The formalization becomes useful when we can begin to see why, and how, it applies to complex situations.

KEY CONCEPTS - FIVE

DEFINITIONS AND EXPLANATIONS

DEFINITIONS -- MARKET STRUCTURE

A description of an industry's MARKET STRUCTURE includes all of the key determinants of the way firms in the industry relate to each other and their customers.

> Researchers in many fields believe that environment is, at least, an important determinant of behavior. Psychologists have studied the impact of environment on a child's emotional and intellectual development. Industrial psychologists have analyzed the impact of environment on individual and group work effort. Economists have analyzed the relationship between environment and the economic behavior of a firm. Because this relationship is an important one a short reference phrase - MARKET STRUCTURE - was created.

Description -- MARKET STRUCTURE

The market structure of an industry can be described by four variables: the number of firms in the industry, the ease of entry and exit, the extent of product differentiation, and the quality of information possessed by both buyers and sellers.

> From the many different characteristics of the environment of the firm economists have centered their attention on the four listed above. These give researchers, corporate strategists, public officials an adequate sense of an industry's market structure.

EXPLANATION -- IMPORTANCE?

The goal of economics is to improve the use of our scarce resources. Consequently economists have identified the key characteristics of a firm's environment which influence the firms behavior. We are concerned with the firm's choice of price, output, their commitment to research and development, growth, and resource use. Through the years evidence has been compiled indicating that the four variables mentioned above are indeed very consequential. Economists believe that the number of firms in an industry is critical as a determinant of price and output policy. The ease of entry/exit and the extent of product differentiation are believed to affect the responsiveness of firms to consumer interest and to new opportunities. Finally, the quality of information influences the consumers' ability to make good decisions and increases the sense of competition among firms for consumers' dollars. As we look at alternative market structures and some of the evidence linking market structure to the performance of the individual firm and the industry you should begin to see importance of a changing market structure.

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KEY CONCEPTS — SIX

DEFINITIONS AND EXPLANATIONS

DEFINITIONS — EFFICIENT ALLOCATION OF RESOURCES

AN EFFICIENT ALLOCATION OF RESOURCES exists when it is no longer possible to improve one individual's sense of well-being without reducing someone else's.

> Putting this in a slightly different way we can say resources are not being used "best" - allocated efficiently - whenever it is possible to rearrange their use and make one person better off while maintaining the status quo for everyone else.

Description — MU = MC

When the marginal utility to every consumer is equal to the marginal cost of production we will have an efficient allocation of resources.

> This statement does not help us understand the concept of an efficient allocation of resources very much, nor does it explain this necessary condition. I have simply described the Necessary Condition with an equation and then with words.

EXPLANATION — REASONING

The question asked is "when can resource use be changed yielding an improvement in one person's sense of well-being without causing a decrease in any other person's?" Recall that, due to scarcity of resources, every action has a cost. Hence we must consider the gain made from a reallocation of resources and the loss incurred. Recall that we have defined the cost of producing a product as the opportunity cost. This means that the marginal cost of production indicates the value of the best alternative use of the resources. That value is determined by the utility to consumers of the output that would have been produced. Thus, when we compare MC to MU for a product we are in fact comparing the value to consumers of the best alternative use of the resources to the value of the last unit of the good currently being produced. If MC is less that MU that means that consumers would be losing less, the value of the foregone output, than they are gaining. This rule should be applied to all outputs and to all consumers.

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Group Exercises

1. Early in the first week of class we discuss basic economic problem, possible goals for an economy, and lay the groundwork for discussion of alternative economic systems.

After we have developed a list of possible goals for our economic system and a basic understanding of what each goal means I break the class into groups of 4 to 6 students. I ask each group to rank the goals and to be able to give a rationale for the ranking. The ranking and the rationale are presented to the entire class.

2. After we have gone through two or three of the Key Concepts pages I had the class prepare one on "Elasticity of Demand." I divided the class into groups of 4 to 6 and asked them to prepare a written statement which would define, describe, and explain the concept of elasticity of demand.

3. Once or twice during the course I will ask students to prepare a "Key Concepts" page which they are to bring to class. Discussion will be based around these papers.

4. During the last section of the course I will divide the class into groups to prepare "Key Concepts" pages.

5. During the discussion of consumer behavior I asked the students to pick one hour during the weekend, describe what they did, and indicate what they would have done had their chosen activity not been available. The papers are used as a basis of a discussion of opportunity costs and decision making.

6. To highlight the interdependence of firms in an oligopolistic market structure I had two teams of students choose pricing strategies for their firms. After several rounds they had to explain the choices they made. I then increase the number of teams to three to indicate the increased uncertainty as the number of players increases. I also experimented with two different price announcement formats. Under one the prices were announced simultaneously. The other format had the groups sequentially announce their prices.

7. Several times during the course I hand out numerical problems which are used as a basis of discussion.

(ORIGINAL IN COLOR)

FIPSE REPORT

STEPHEN L. ZABOR

HIRAM COLLEGE

I began my class with three basic objectives: 1) I wanted to involve the students first-hand in their personal intellectual development and the development of their fellow students: 2) I wanted to introduce the students in the class to the existence of alternative approaches to the economic dilemma: and 3) I wanted to implement a new approach to the teaching of economic analysis.

Given the student response to the innovations employed I would declare the experiment a success with a need for continuing development.

1) Approximately six times during the quarter I divided the class into groups of four or five students. A discussion topic was presented with a clear goal and time limit attached. Each time more students participated in the discussion and tested their own ideas than would have in a more traditional lecture format. On each occasion the group had to present a consensus opinion to the class and be prepared to defend that position. At this time I would not accept dissent within the group but would allow challenge and dissent from other groups. Each time a group exercise occurred I would ask each student to prepare a personal statement on the issue expressing their own understanding and opinion with some comparative discussion of the other

positions presented during the class. The group discussion and presentation seemed to accomplish two major tasks. First, more students in the class tested their own understanding of the material through oral expression than would have occurred with other class formats. Second, students frequently found themselves defending positions which might be foreign to them. Through our discussion students became more aware of the existence of resonable alternatives to their own positions and gained better understanding of their beliefs. A second example of involving students in their own education was my request that each student choose one hour during a given weekend. They were to indicate what they did, what their major considerations/goals were, and what the best alternative use of their time would have been. This is a simple attempt to get students to think about a rational decision-making process.

Alternative approaches were introduced carefully and simply. In general two alternatives were offered and explained. The first opportunity for students to see the possibility of alternatives came with the ranking of societal goals. After a discussion based on the textbook's presentation of goals and objectives I divided the class into groups of four or five to rank the list of goals. First students had to argue their position within the group and then they had to argue their group's position. Two goals were accomplished. Student's became more aware of the source of disagreements about policy and they became more aware of

the difficulty of achieving multiple goals, i.e., the existence of trade-offs.

My last objective was approached through the development of Key Concept pages. Each page introduced the definition, description, and explanation of an economic concept. In the early portion of the course I provided complete pages to the students. We discussed these in class and linked them to the text. Later in the course I asked the students to prepare a Key Concepts page in class. Groups of four or five worked together for a specified amount of time. As I walked around the class I became aware of the difficulties students were having differentiating between a description and an expanation. It is extremely important to highlight the verbs employed during an explanation and to contrast these to the verbs indicating a definition or description. This can be done while the purpose of explanation. Students need to know that explanation allows them to apply their newfound knowledge to new and different situations. During the time I spent with each group I could help them formulate their notions of definition/description/explanation. Then their results were shared with the class. Finally, I asked each student to prepare their own page on a given concept.

My personal reaction is that the combination support and challenge I offered in this class was not quite right. I have learned quite a lot about involving students in their own learning quest and about the support which is necessary to successfully deal with complex, and logically demanding material. I was pleased with the students' response and only

hope that the gains made the next time I teach the course will be as great. I need to be sure that a gradual weaning process takes place during the course with a gradual increase in the responsibility of the individual student. However, I feel that I can not, during this introductory course, remove completely the supportive net given by my structure and presentation.

A remedy [illegible]
[illegible] about [illegible]

GE 300 - THE NATURE OF SCIENCE

Fall 1987 - 88 Dr. Arthur R. Murdoch

Regular class meeting schedule: 8:30 - 9:45 Tuesday, Thursday
Room 219 - Wilson Hall

Textbook: none

Required Materials: two bound (spiral ok) regular size
(8 1/2 by 11) notebooks

Instructor's office: Room 110 - Wilson Hall
Office Hours: 1:30 - 4:00 Monday, Tuesday
and by appointment
Telephone: Office - Ext 304; Secretary - Ext 306;
Home 821-3938
(weekday evenings 7:00 to 10:00 only please)

Course description: Mount Union College Catalogue, pg. 106
GE 300 The Nature of Science. Study of some aspects of the origins, development, and social impact of scientific concepts, methods, and institutions in the modern era, as discussed by scientists and others. Major emphasis will be given to the increasingly massive and powerful science establishment of recent decades, and its interaction with public policy and with various aspects of our culture. Prerequisites: EH 100, SP 100. Not open to freshmen. 3 Sem. Hrs.

Assumptions:
The student is expected to have the ability to:
a) Use a word processor (to be discussed later).
b) Undertake self directed reading.
c) Develop reasoned conclusions.
d) Share and support conclusions.
e) Write and speak correctly and effectively.
f) Maintain sensitivity to differing and opposing opinions

The student is expected to read extensively from materials sought out by the student in the areas of the topics to be considered in the course. Although no technical background is required or expected, some mastery of the technology will be necessary to permit the appropriate value judgements. The students reading and class discussion should provide the necessary background for the formulation of a tentative position by the student on the issues considered. The chosen position may change in the future due to new data or changing circumstances. This course is intended to assist the student in developing the ability to effectively articulate and rationally support the current position advocated. This articulation should be presented in both class discussion and written assignments. The student should be able to absorb information and opinions on various sides of issues, then come to a reasoned conclusion. The student should be able to rationally support his or her conclusion and listen sympathetically to opposing opinions and their support. Since the matters to be considered in this class will be unresolved issues involving value judgements, it is understood that unanimous agreement and even a consensus is not expected or desired. Our goal will be a better understanding of the relationship between modern science and technology and the social structure in which we live.

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Tentative Course Outline:

The topic schedule will initially be as follows, but is subject to revision depending upon the needs of the class or outside events. Other topics and issues may be used in place of those given if events suggest such changes. Some topics may run longer than scheduled, others shorter, and the sequence may change. This tentative outline is meant to illustrate the nature of topics that will be considered and an approximate possible schedule, but is not to be considered binding in any respect.

WEEK	TOPIC
1, 2	History and Development of Modern Science
3, 4	Scientists View of Man - selected essays
5	The Telecommunications Revolution
6, 7	The Computer Revolution
8, 9	The Energy Crisis and World Survival
10, 11, 12	Biomedical topics
13, 14	Mini symposia

Class Requirements and Grade Base:

A) Class Attendance and Participation
   1) Attendance - 10%
   2) Participation - 10%

B) Class papers
   1) Four short papers - 20%
      See assigned topics later in syllabus, at 5% each
   2) One major research paper - 20%
      Grade distributed over Outline, Draft, and Final Copy

C) Class notebooks
   1) Class commentary 15%
   2) Annotated bibliography of readings - 15%

D) Mini-symposia - 10%
   Details to be distributed later.
   Although provision for the symposia is included here, this portion of the course is contingent upon progress of the class through the semester.

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Discussion of Nature and Direction of the Course:

This course is an elective course that is one of the options for fulfilling the non-laboratory component of the science requirement (Mount Union College Catalogue pg. 28). This option was accepted by the Faculty of the College based upon the premise that a general understanding of the nature of science and its promise and problems, its relation to society and social values would serve the student as well as an in-depth study in a single subject area of science. To this end, we shall be, together, undertaking a study of where science is today, where it may be taking us tomorrow, and what this all may mean to our society and the life we may lead.

The goals of this course are to:

1) Provide an understanding of the distinction between Science and Technology.
2) Provide an insight into the actual and potential capabilities and limitations of modern technology.
3) Provide an insight into the complex interdependence of Science/Technology/Society.
4) Provide confidence that the citizen can and should participate in technological discussions and decisions without the necessity of a technical expertise.
5) Provide a basis for drawing the distinction between Science and speculation or advocacy disguised as science.
6) Encourage critical thinking about the moral and ethical issues inherent in the interdependence of Science, Technology and Society.
7) Provide the opportunity for critical writing at both formal and informal levels.
8) Provide the opportunity for critical, informed discussion of issues of importance to personal and societal future.

The schedule of topics given for this course is subject to change as the term progresses. Most importantly, we will take notice of current events relevant to the course. Examples of topics that have required attention in the past were the Three Mile Island accident, the Challenger disaster, and the Chernobyl accident. Other recent events that would justify notice are the Baby M case and the USS Stark disaster in the Persian Gulf this past summer. The moral and ethical implications of technological capabilities and societal dependence on our technology that these events illustrate are the very essence of this course.

The course will be conducted in a seminar/discussion format. It is expected that each student will read from various sources to permit a dialogue in class. Due to the nature of the subjects considered and the rate of progress of science and technology, timeliness of information is important. You are, therefore, encouraged to concentrate your reading in current sources. To encourage wide reading, an annotated bibliography is included as a part of the course requirements. Suggestions for readings will occasionally be made but use of a variety of current source materials is strongly encouraged. References may be drawn from various periodicals in the College Library or elsewhere. Special attention should be directed to the "Letters to the Editor" sections, as this is where many of the

debates on issues of interest to this course will occur. References may well come from non-print sources such as radio or TV newscasts or special programs. Sources should include a variety of periodicals and reference resources. Periodicals which regularly have pertainent material include TIME, NEWSWEEK, US NEWS AND WORLD REPORT, NEW YORK TIMES, and THE WALL STREET JOURNAL as well as nontechnical science publications such as SCIENCE, SCIENTIFIC AMERICAN, DISCOVERY, SCIENCE 87, SCIENCE NEWS, AMERICAN SCIENTIST, SCIENCE DIGEST, CHEMISTRY AND ENGINEERING NEWS, AVIATION WEEK AND SPACE TECHNOLOGY, BIOSCIENCE, SCIENCE AND SOCIETY, SKY AND TELESCOPE, IMPACT OF SCIENCE ON SOCIETY, SCIENCE TECHNOLOGY AND HUMAN VALUES, BULLETIN OF THE ATOMIC SCIENTIST, FAS PUBLIC INTEREST REPORT, THE HASTINGS CENTER REPORT, and the CHRISTIAN SCIENCE MONITOR. This list, however, is not by any means exhaustive.

Other sources of value would include numerous books directed to the issues of Science/Science Ethics. Many valuable publications are available from the Government Printing Office, including several energy related publications available from the instructor, as well as numerous items in the College Library. Pertinent testimony and entries in the CONGRESSIONAL RECORD should not be overlooked.

Finally, no source is "off limits". As a result of the all-pervasive impact of science on society, almost any publication will carry articles appropriate as source of references. It must be pointed out however, that many publications have a particular, strong and pervasive bias that would caution the reader to view the report with appropriate skepticism. I encourage a wide range of reading and thought for your bibliography notebook or papers, and as a background for class discussion.

Note Regarding Plagiarism:

Each student is expected to do his or her own work independently except for the obvious case of team assignments. The student is therefore responsible for the work. Plagiarism is the use of another persons work and claiming it as your own. This is not to be confused with the use of source material which is properly credited. Plagiarism is thus a fancy word for cheating. This behavior is unacceptable in this course, indeed, it is unacceptable in any setting. Although the burden of proof of plagairism is on the instructor, it is considered to be a most serious academic offense and if you plagiarize and are caught, you will be subject to penalty including, but not limited to, possible zero for the assignment, failure of the course, or report to the Dean of the College who has the authority to discipline you further - including dismissing you from the College. For a further discussion of this issue, see the attached statement on Plagiarism .

Discussion of class requirements:

A) CLASS ATTENDANCE AND PARTICIPATION

1) ATTENDANCE -- 10%

As a matter of College Policy, regular class attendance is expected and required (Mount Union College Catalogue, pg. 32). By their very design and nature, regular attendance at "seminar" type courses such as this is especially important. There is no way to make up an absence and regardless of the reason, an absence represents a class where not only did you miss the presentation of the day, but also your fellow students missed your contribution. Consequently, attendance will be taken each day, usually in the form of assigned writing. Your grade for attendance will be reduced be 1% for each two absences. Absences for bona fide reasons, as determined by the instructor, will count as one half of an absence. Dates on which you know you will be absent due to extra-curricular activities, outside requirements of other courses, etc. MUST be cleared with the instructor BEFORE THE FACT to qualify for the half charge provision.

2) PARTICIPATION -- 10%

Due to the "seminar" nature intended for this course, it is expected that each student will read appropriately to prepare for each class and contribute to the conversation in class. Occasional suggestions will be made of articles or other sources to consult in preparation for a class, but usually you will be expected to seek out pertinent material, especially from current literature, on your own. Consideration of in-class writing will be included in this portion of the grade.

B) CLASS PAPERS

These will be graded on both content and form. Any approved style guide may be used. A "letter perfect" typed copy of all papers will be expected. Correct grammar, spelling, and punctuation, and general proper use of English will be required in all cases. ALL errors will subject a paper to a grade penalty. Unacceptable papers should be promptly rewritten and may be resubmitted for regrading within one week of their return to the student. The recorded grade for a resubmitted paper will be the average of the original and the resubmit grades. Proper satisfaction of this requirement may best be achieved through utilization of the word processor lab in the basement of McMaster Hall or some equivalent facilities. All late papers will be subject to a grade penalty. All papers are due at the end of the class period on the day specified.

CRITERIA FOR GRADING PAPERS: (Adapted from Prof. David Ragosin)

1) RELEVANCE - The relationship of the subject of the paper to the themes of the course should be clearly and explicitly presented.

2) CONTENT AND SYNTHESIS - The subject of the paper should be developed in relation to the themes of the course. The applications of the subject and the implications which may be drawn should be developed in context of the Science, Technology, and Societal Values interface.

Questions to be considered while writing your paper include:

a) Are your assumptions clear?
b) Are the arguments internally consistent?
c) Is the necessary evidence presented?
d) Do the arguments ignore any of the essential or fundamental facts or data?

e) Do the arguments violate any basic physical or social principles or concepts?
f) Do the interpretations of the assumptions and evidence lead to the suggested conclusions?
g) What is the writers point of view? Does he or she adequately expose the basis, mode, and direction of thought to the reader?

3) MECHANICS

a) Overall Organization - A well organized paper begins with an appropriate title which explicitly or implicitly expresses the subject and purpose of the paper. The paragraphs in a well organized paper follow each other in a logical fashion and are held together by appropriate transition devices.

b) Internal Organization - The superior paper is composed of paragraphs which are unified and coherent. Unification is achieved when each paragraph is restricted to one central idea with the discussion, illustrations and examples selected to amplify or explain or develop the concept of that central idea. Coherence is achieved when the sentences within each paragraph follow or relate to each other in a logical manner.

c) Use of Detail - Papers of quality are characteristically marked by meaningful details, illustrations, and examples. Generalizations are supported, complex concepts are analyzed, abstract ideas are made concrete.

d) Sentence Structure and Sense - Superior papers always contain sentences of varying length and form. Idiomatic, general English is the most appropriate form of the language for papers in this course.

e) Mechanical Accuracy - Under this heading fall such matters as spelling, punctuation, and pronoun usage. The student should demonstrate a mastery of basic English grammer. Papers containing frequent spelling errors, sentence faults, and pronoun errors will be failed. Such papers usually indicate that the writer was too lazy and uncaring to devote enough time to proofread and revise his or her paper.

4) FOOTNOTES, REFERENCES, AND BIBLIOGRAPHY - Papers must include footnotes and references for cited material. Any approved style guide may be used but the "end notes" approach is the most common. Each paper must include a bibliography of the sources used in preparing the paper. Sources must be fully and properly cited. The number of sources appropriate depends upon many factors, including the nature of the topic and the nature of the resource used. If sources are short articles, several will be expected, however if longer items or books are used, substantially fewer will be adequate. Two general guidelines may be used - resource pages should be at a minimum twice the pages composed and adequate sources should be used to give a view of the subject from several differing perspectives.

5) STYLE AND APPEARENCE - The paper should be composed and arranged in such a manner as to invite the reader. All papers must be typed (preferably word processor), double spaced on 8 1/2 x 11 paper. Leave reasonable margins (approx. 1" all sides). Papers must have a cover (title) page bearing the title, authors name, date, course, etc. Pages must be numbered and each bear the authors initials. All papers must be submitted with pages properly collated and "bound" with a theme cover or some equivalent device. Included in this is an attractive layout of the title page, layout and division of the text pages, and separation of the footnotes and references from the body of the text.

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1) Short Papers - 20% (Four at 5% each)

Each paper will be graded on a scale of 0 to 25 points. Point division will be: Relevance - 5; Content - 5; Mechanics - 5; Footnotes etc. - 5; Style etc. - 5 (see Criteria for Grading Papers above). The Short Papers portion of the course grade will be obtained by dividing the total points of the four papers by 5.

These papers should be written with personal involvement - your ideas and feelings as supported by your readings, etc. They should NOT be "third person" dispassionate discourses on some topic of no interest or concern to you. Become involved in your topic and argue your points with conviction.

These papers should be between 2 and 3 pages long plus an appropriate bibliography. At least two sources are expected for each, not including dictionaries or encyclopedias. Footnotes must be used if and when appropriate.

Topics for the four papers and due dates are:

a) The manner in which science/technology has had an impact on your lifestyle. Use a single individual example. Be explicit.

Due date: 24 September.

b) A specific scientific/technological development you expect to occur in the near future (by the year 2000) and how it will effect the world. Note - continued implementation of current technology does not qualify unless it is accompanied by some major innovation or applied to some unexpected area or in an unexpected way.

Due date: 21 October.

c) A suggested direction to seek a solution to the long term energy crisis, how this may be implimented, its problems and promise, and its net effect/impact on society.

Due date: 12 November.

d) A specific area of the "biomedical revolution" (past, present or future), its impact and problems the devolpment brings.

Due date: 2 December.

2) Term (Research) Paper - 20%

The term paper will take the form of a major research paper. It may be on any topic relevant to the thrust of this course - i.e. the impact of science/technology on society, the effect of societal needs and goals on science/technology and the moral and ethical problems created by scientific/technological progress. The issue addressed may be a technology now well integrated into society where the advantages and problems are fairly well known, such as television or the automobile, or a newly developing technology where both promise and problem may be more speculative, such as computers or space travel. In any case the technology should be discussed only to the depth necessary to understand its impact on society. The major focus should be on the societal and ethical questions raised by the development and how society responds to or is affected by these issues. The reverse feed-back should also be examined - that is how societal concerns influence the nature, direction, development, and application of the technology being considered. Indeed, a paper dealing with a technology which has not been developed or has been discarded due to societal rejection would be most appropriate. In the usual case, the paper should close with a statement by the writer presenting his/her view of the ethics or morality of the problem and its resultant resolution or current status. Such statements should be carefully considered, thoughtfully expressed, and supported by reference to data presented in the paper.

The Outline should be sufficiently worked out to give a direction for the paper and to provide a listing and summary of the sources to be used. Usually four to twelve sources will be expected. It is understood that the direction indicated in this outline may require revision as the paper is written but sufficient preparation should go into the outline to indicate that the writer is knowledgeable in the topic chosen. The outline will count for 25% of the paper grade.

Due date: 15 October.

The Draft Copy should be 10 to 12 "standard" pages, properly footnoted and referenced. A complete bibliography should be appended and be in addition to the required pages of text. The draft copy will be returned with comments and suggestions for the final copy. The previously submitted outline **must** accompany the draft copy. The draft copy will count for 50% of the paper grade.

Due date: 19 November.

The Final Copy should be 12 to 15 pages plus footnotes and bibliography. The draft copy and outline **must** accompany the submission of the final copy. The final copy will be retained permanently by the instructor, but you may pick up the draft copy and outline with appended comments about the final copy any time after the end of final Exam Week. These materials will be retained by the instructor for one semester. If they have not been claimed, they will then be discarded. The final copy will count for 25% of the paper grade.

Due date: 8 December.

C) CLASS NOTEBOOKS

Each student is expected to maintain two notebooks for this course. These should be regular "notebook" size. To maintain the integrity of the notebook, they must be bound. A "loose leaf", "duo-tang", or folder of separate sheets is not acceptable. Clearly legible hand written (ink, e.g. ball point, preferred) not printed or typed, copy is expected in these notebooks. To help assure neatness, write only on one side of the page. This will also provide space for the instructor to enter comments and discussion in response to your entries. Since they will be handed in separately, they must be physically separate. The pages in the notebook should be consecutively numbered. The notebooks should begin with a few pages reserved for an index that will be constructed and entered as the notebook is filled.

Each notebook will be collected for review throughout the semester as specified below. This will help to assure that you are satisfying the intended format and content as well as making progress toward meeting these requirements. The notebooks will usually be returned the class period following the due date. The instructor will not append a specific grade to the notebook, but will comment on the perceived thoughtfulness of your entries. Although these periodic submissions will be considered optional, failure to take advantage of this opportunity will deprive you of the instructor comment which would be of assistance to you in preparing subsequent entries. No penalty will be directly assessed for non-submission, but regular progress in quality and quantity of work as shown by the periodic review will be considered when the notebook grade is assigned.

Both notebooks are due for final grading on the last day of class for the course. As with the term papers, they may be picked up after the end of Exam Week. They will be retained by the instructor for one semester and if not claimed, they will be discarded.

1) Class Commentary - 15%

The first notebook should be a daily record of the discussions of the class. It should NOT be class notes per se but a commentary on matters discussed or questions raised in class and your reactions or responses to these issues. This "diary" should be prepared shortly after each class while it is still fresh in your mind. Class notes may be included to "prompt" your memory, but it is your thought and reaction that are sought. The daily entries should be of such length as is necessary to raise the questions or present the responses suggested by the class. In general, a minimum of one page would be expected. Each new class day entry should begin on a new page. This notebook will be collected and reviewed as indicated below. The final grade assigned will depend in large part upon you development of thoughtful, critical and incisive entries.

Submission dates:

Last initial A -> K: 8 Sept., 29 Sept., 27 Oct., 24 Nov., 10 Dec.
L -> Z: 10 Sept., 1 Oct., 29 Oct., 24 Nov., 10 Dec.

2) Bibliography Notebook - 15%

The second notebook will contain an annotated bibliography of readings, news items, etc. which deal with the subject of this course - the interplay and interaction of Science, Technology, and Society. In addition to page numbers, each entry should be numbered sequentially and added to the index. Each entry should begin with a new page. Each entry must be properly and fully cited giving author, book or magazine, date, page, etc. The entry should be a brief summary of the referenced source followed by a critical comment discussing its meaning, relevance and importance in the context of this course and why you chose to include this reference. It is expected that you will have at least 50 entries (slightly more than 3 per week) and steady progress would indicate approximately 12 new entries for each submission date. These references should be on a wide variety of subjects and come from a variety of sources illustrating the pervasiveness of science in society. Although no sources are "off limits", it would not be appropriate to include the references used for your class papers in this listing. However, articles etc. read to prepare for class discussion would be appropriate to include. Reference to the earlier listing of resources may suggest sources of articles.

Submission dates:

Last initial A -> K: 15 Sept., 6 Oct., 3 Nov., 10 Dec.
L -> Z: 17 Sept., 8 Oct., 5 Nov., 10 Dec.

PLAGIARISM
From the MLA Handbook

Derived from the Latin word plagiarius ("kidnapper" and also "plagiarist" in the modern sense), plagiarism is defined by Alexander Lindley as "the false assumption of authorship: the wrongful act of taking the product of another person's mind, and presenting it as one's own" (Plagiarism and Originality [New York: Harper, 1952], p.2). Plagiarism may take the form of repeating another's sentences as your own, adopting a particularly apt phrase as your own, paraphrasing someone else's argument as your own, or even presenting someone else's line of thinking in the development of a thesis as though it were your own. In short, to plagiarize is to give the impression that you have written or thought something that you have in fact borrowed from another. Although a writer may use other persons' words and thoughts, they must be acknowledged as such. The following passage appears in Volume I of the Literary History of the United States.

> The major concerns of Dickinson's poetry early and late, her "flood subjects," may be defined as the seasons and nature, death and a problematic afterlife, the kinds and phases of love, and poetry as the divine art.

The following, given without documentation, constitutes plagiarism:

> The chief subjects of Emily Dickinson's poetry include nature and the seasons, death and the afterlife, the various types and stages of love, and poetry itself as a divine art.

But one may write the following with an accompanying note:

> Text:
> It has been suggested that the chief subjects of Emily Dickinson's poetry include nature, death, love, and poetry as a divine art.[1]
>
> [1]William M. Gibson and Stanley T. Williams, "Experiments in Poetry: Emily Dickinson and Sidney Lanier," in Literary History of the United States, ed. Robert E. Spiller et al., 4th ed. (New York: Macmillan, 1974), I, 906.

If there is doubt concerning plagiarism, cite the source or sources.

"When entering alien territory, it's helpful to have a road map."

This is your SYLLABUS for PHILOSOPHY 100. Read it with care; it explains most of the WHAT, WHEN and HOW of this course, e.g., reading and writing assignments, paper and test due dates, quizzes, grade proportions, and special features of this course.

Bring this syllabus, your text and notebook to all class meetings.

PHILOSOPHY 100

Introduction to Philosophy

Dr. Robert E. Myers
Philosophy Department
Cochran Hall, Room 222
Office Hours:

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PHILOSOPHY 100 Introduction to Philosophy

PHILOSOPHIC VISIONS:

Intellectual hors d'oeuvres to a Way of Life

"The unexamined life is not worth living."

"Know thyself."

Socrates

"In all other occupations the fruit comes painfully after completion, but in philosophy pleasure goes hand in hand with knowledge. [Therefore] let no one when young delay to study philosophy, nor when he is old, grow weary of his study. For no one can come too early or too late to secure the health of his soul."

Epicurus

"The problem of restoring integration and cooperation between man's beliefs about the world in which he lives and his beliefs about the values and purposes that should direct his conduct is the deepest problem of modern life. It is the problem of any philosophy that is not isolated from that life."

John Dewey

"To know the chief rival attitudes towards life as the history of thinking has developed them, and to have heard some of the reasons they can give for themselves ought to be considered an essential part of liberal education."

William James

D. Special Features of <u>this</u> Introduction to Philosophy Course

Three of the features that set Philos. 100 apart from many, if not most, of the Intro. to Philos. courses that are offered elsewhere are:

1. the deliberate integration of literature and philosophy

   Philosophic issues in this course are introduced through literature, specifically through carefully selected science fiction short stories, and special philosophic essays that are correlated to the themes of the chapters of the text.

2. major emphasis placed on development of critical thinking skills and thought-and-writing assignments:

   Four thought-and-writing assignments, embodying various critical thinking skills, are to be completed during the course of the semester. (Ref. weekly schedule page) Detailed explanations and specific assignments will be distributed at appropriate times.

   Only two <u>tests</u> are scheduled, one near mid-term and a second at or near the end of the semester. (Ref. T#1 and T#2, weekly schedule page) Both will be of the "short-answer, objective" form and will concentrate on the "factual material" presented in the text, supplementary readings and in class.

   You will have to know many of "the facts" covered by these tests in order to complete the thought-and-writing assignments satisfactorily.

3. limited enrollment, high involvement, high expectations:

   Experience indicates rather clearly that people master the critical skills and techniques of philosophy better by regular and active participation than by irregular and passive procedures.

   We deliberately set a cut-off point for the number of persons who can enroll in Philos. 100 for a given semester in order to provide a greater degree of student involvement in the daily activities of the course. Expectations for regular attendance and preparation and for regular and significant participation are high in Philosophy 100, but unless you and I have high expectations for ourselves and one another we might settle for much less than we are capable of achieving.

E. General Course Description and Rationale

1. Students will engage in an introductory exploration of some of the philosophic problems that arise in the course of our daily lives.

   Among the issues that we will explore are:

   personal identity; the nature of the self; special aspects of being human; the nature of time and space; mind; knowing and doubt; values and social ethics; freedom; religious beliefs; and outlooks and methods of philosophy.

2. The unexamined assumptions we hold or the solutions that we accept as satisfactory in relation to these issues produce significant consequences for our lives, our way of life, and our relationship to others and to our physical, technological, socio-political, religious and moral environments.

   Although we often try to avoid examining these issues, we cannot escape from them simply by ignoring them. They are "living issues" in the community of humankind.

   Each of us must make intelligent decisions about these issues

   or

   bear the consequences of allowing someone else to make these decisions for us.

3. One of the central aims of this course is to encourage people to begin thinking philosophically about the problems, issues and assumptions that constitute pivotal points of our private and public lives.

   The concerns, skills and issues with which we will be working interpenetrate several disciplines that we often construe as separate.

   These concerns, skills and issues are vital strands of that process of experience, struggle and existence that we call humanity.

   These are the kinds of concerns that are at the heart of "the liberal arts tradition" and the stated educational goals of Bethany College.

F. Areas of Focus and Usual Procedures

1. We will focus on the following issues which are selected from those that cluster around three general areas of philosophy:

a. The Nature of Knowledge and Reality

(1) The Problem of Skepticism - Epistemology
—knowledge-claims, justification for
—certainty, doubt, probability
—criteria

(2) The Existence of God - Philosophy of Religion
—attributes of deity
—grounds for belief
—reality of evil

(3) The Nature of Space and Time
—physics and Metaphysics
—dimensions and directions; static, dynamic
—concepts and reality----and consequences

b. Our Human Nature - On Being Human

(1) The Philosophy of Mind
—human and machine----same or different
—intelligence and artificial intelligence (AI)
—other aspects, behavior, thought, etc.

(2) The Problem of Personal Identity
—person, person-hood? human nature?
—change, constancy----similar, same
—body, soul, memory

(3) The Question of Free Will
—responsibility and ethics; reward, punishment
—libertarianism
—causality
—determinism--mechanistic, nonmechanistic

c. Values - Axiology; Ethics

(1) The Justification of Values
—ethical judgments
—value theory
—basis of good/bad, right/wrong

(2) The Problem of Anarchy
—political theory and social ethics
—the state and citizen rights
—relation of theory and practice

2. Usually exploration of each of these (eight) issues will proceed as follows:

   a. First, we will survey the conceptual geography of the issue area. This includes:

      (1) detecting the context and the dimensions of the issue,

      (2) mastering
          (a) the relevant terms
          (b) and the concepts and conceptual tools required to deal effectively with the issue,

      (3) and discovering
          (a) some of the answers that have been proposed
          (b) and some of the problems with these answers to the issue.

   b. Second, we will discuss the appropriate science fiction short story (called a "conceptual experiment") --to discover how a question is asked or an answer is provided in this fictional context.

   c. Third, we will investigate a similar or different answer that is presented in an argument by a philosopher in a somewhat scholarly article.

   d. And then, students will develop answers to questions in ways that require using the skills and knowledge that they have acquired in the earlier steps of exploring the particular philosophical issue(s).

      In most cases this phase will culminate in a thought-and-writing assignment. (Ref. next section for basic guidelines for such assignments.)

It will be assumed that everyone enrolled in this course will have <u>studied</u> the appropriate material in the text and/or supplementary readings <u>before</u> the class meeting at which that material is to be discussed.

3. Usual Procedure: Minimal Guidelines for Thought-and-Writing Assignments:

a. Your paper should have a theme. That theme should run through the parts and serve to connect these parts.

—Thematic unity and coherence are important attributes of critically focused thinking and writing.

b. Your paper should begin with, or have, a thesis statement.

—Readers tend to become frustrated or bored if they cannot discover the writer's thesis or main point.

c. In your paper you should use two or three generalizations related to your thesis to elaborate, explain or otherwise develop your thesis statement.

—Avoid using generalizations that bear no, or no clear, relation to your thesis statement or to the paper's theme.

d. Use illustrations or examples to support these generalizations and to provide the necessary details or specificity for clinching your thesis.

—Avoid using illustrations or examples that illustrate something only incidental to or unrelated to the generalizations, thesis or theme.

e. Your paper should have a beginning, a middle and an end.

—It should end or close with some conclusions—conclusions that follow from and are supported by earlier parts of the paper.

f. If you are uncertain about what a term means or about how to spell a word, by all means check it out by using a good dictionary.

g. Develop the habit of proofreading and of presenting your best work.

—The paper you turn in is somewhat like a job application: it tells or <u>shows</u> the reader something about you, something about the pride you take in your work and something about the quality of work you are performing at your present job.

G. Abilities/Skills to be Developed and Demonstrated

Students who complete the studies in this course satisfactorily will develop and demonstrate, by oral and written means, the skills or abilities:

—to identify and analyze several philosophic problems

  —embodied or assumed in normal human conduct, thought and institutions

  —portrayed in the imaginative literature of science fiction

  —elaborated and examined critically in philosophic writings

—to identify and assess the strengths and weaknesses of several answers thought to solve these problems

—to identify and analyze several previously unexamined beliefs and assumptions in one's thought and behavior

—to trace out implications and consequences of beliefs, commitments and decisions

—to identify and use effectively basic logical skills necessary to evaluate arguments

—to identify and assess criteria by means of which one is able to distinguish effectively between philosophically defensible and indefensible choices, decisions, arguments and consequences

H. Basic Text: Thought Probes: Philosophy Through Science Fiction. Fred D. Miller, Jr. and Nicholas D. Smith, editors. Englewood Cliffs, NJ: Prentice-Hall, 1981. Paper

Week	Text Chapt. - Topic [& Supplementary]
1	Introductory materials; Text "Introduction: Thought Probes in Philosophy and Science Fiction." Survey of areas of philosophy; methods of philosophy & science fiction
2-3 → Paper 1	Chapt. 1 "Skepticism and the Theory of Knowledge: What do you know for certain?" Kinds of skepticism and area of Epistemology "Welfare Department" by R. Gaines Smith "Descartes' Evil Genius" by O.K. Bouwsma
3-4 → Paper 2	Ch. 2 "Philosophy of Religion: Does God exist?" Range of concerns in Philosophy of Religion "The Star" by Arthur C. Clarke "The Problem of Evil" by John Hick [Isaac Asimov and Duane Gish, "The Genesis War," Science Digest (Oct. 1981).]
5-6	Ch. 3 "The Philosophy of Time and Space: Time Travel: Can it be done?" Interpretations of Time and Space-Time, Problems [Filmstrip selections from The Time Machine movie] "All You Zombies--" by Robert A. Heinlein "The Paradoxes of Time Travel" by David Lewis
T#1	
7-8 → Paper 3	Ch. 4 "Philosophy of Mind: Men and Machines: Is there a difference?" Scope of Philosophy of Mind; What is it to be Human? "For a Breath I Tarry" by Roger Zelazny "What Is It Like to Be a Bat?" by Thomas Nagel [Isaac Asimov. "Evidence."]
9-10 → Paper 4	Ch. 5 "The Problem of Personal Identity: What are the principles of personal identity?" Conceptual geography of the Personal Identity issue [Jack Williamson, "With Folded Hands . . ." and Isaac M. Le Guin, "Nine Lives."] "The Meeting" by Frederik Pohl and C. M. Kornbluth "Will Tommy Vladek Survive?" by John Perry
11 → Paper 5	Ch. 6 "Free Will and Determinism: Is Everything determined by causes outside our control?" Survey of responses to the question "The Satyr" by Stephen Robinett "Being and Doing: Some Thoughts About Responsibility" by Michael Gorr
12 → Paper 6	Ch. 7 "Value Theory: Can you know what is right or wrong?" Context in which the issue arises "The Cold Equations" by Tom Godwin "Morality and Marilyn: A Commentary on Tom Godwin's 'The Cold Equations'" by Jan Narveson
13	Ch. 8 "Social Ethics: Is politics necessary?" Political theory, anarchy and citizen rights "Cloak of Anarchy" by Larry Niven "How to Back Into a State Without Really Trying" by Robert Nozick
T#2	

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I. Quizzes and Other Details; Basis for Term Grade—Note Well

1. Additional materials may be assigned to supplement the text's treatment of certain issues.

2. There will be four (4) Thought-and-Writing assignments:
Paper #1 will be related to Chapter 1 of the text;
Paper #2 will be related to the theme of Chapt. 2;
Paper #3 will be on a topic that bridges or interrelates Chapts. 4 and 5;
Paper #4 will be on a topic that bridges Chapts. 6 and 7.

Due-dates will be announced when assignments are given--but ref. schedule page for approximate due days.

All final drafts are to be typed or printed on a printer that has true ascenders and descenders. Even when earlier drafts are requested, a typed copy is in order (unless, due to the special nature of the assignment topic, typing would be inappropriate).

3. Unannounced quizzes may be given at any class meeting. The quizzes will be brief and usually related to reading assignments or recent class activities.

Note that these brief unannounced quizzes are <u>not</u> make-up items.

4. Plan to complete ("take") the tests at their scheduled times and have other work completed and handed in on scheduled due-dates.

Usually no special arrangements for make-up tests or for extension of due-dates will be made.

5. Basis for term grade:

a. Each thought-and-writing assignment = 1/10 (X 4) = 4/10

b. Each scheduled test = 2/10 (X 2) - - - - - - - - = 4/10

c. Quiz scores - = 1/10

d. Regularity and significance of participation - - = 1/10

NB: Do keep in mind that quizzes are given in class, that the two tests are scheduled as in-class tests, and that much preparation for the four writing assignments will or should take place in class.

J. Sketch of "Introduction"--ref. text

What is Philosophy?

Although you should be able to answer this question better by the end of the course, after having studied several areas of the field, the following will provide a sketch of the area and aspects of philosophic method.

1. philia - sophia = "love of wisdom" or philosophy
2. science fiction or speculative fiction, imaginative literature -- the best of science fiction is "a philosophic literature"
3. both philosophy and science fiction arise from "a sense of wonder"
4. "conceptual experiments" - the concept and use for this class
5. questions about "facts" and assumptions

Areas of Philosophy

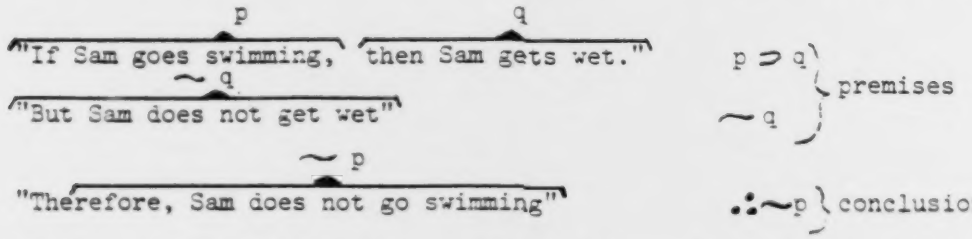
1. Axiology - General Value Theory (metaethics)
   a. Ethics
      (1) Normative ethics
      (2) Cf./cp. descriptive ethics
   b. Aesthetics
   c. Social and Political Philosophy
2. Epistemology - Theory of Knowledge
   a. Typical questions within the area - answers assumed
   b. Skepticism
   c. Knowledge-claims of Empiricism and Rationalism, for example
3. Metaphysics - theory of the basic nature of reality and concepts used to interpret reality
   a. Examples of metaphysical claims; causality, rational nature of the universe, its structure and workings
   b. Dualism, monism, materialism, idealism
4. Logic - study of patterns of inference; correct reasoning
   a. Valid and invalid forms of reasoning and argument
   b. Deductive logic - its features and claims
   c. Inductive logic - its features and claims
5. Metastudies and Applied Philosophy ("philosophy of ---")
   a. Philosophy of Religion
   b. Philosophy of Time and Space
   c. Philosophy of --- (various areas) - questions asked
   d. Applied Social Philosophy
      --philosophy of law, medical ethics, business ethics . . .
6. History of Philosophy
   a. Ancient-Medieval
   b. Modern (Renaissance to Nineteenth Century)
   c. Twentieth Century (Contemporary)
   d. Eastern; National; and other special foci

Philosophical Method

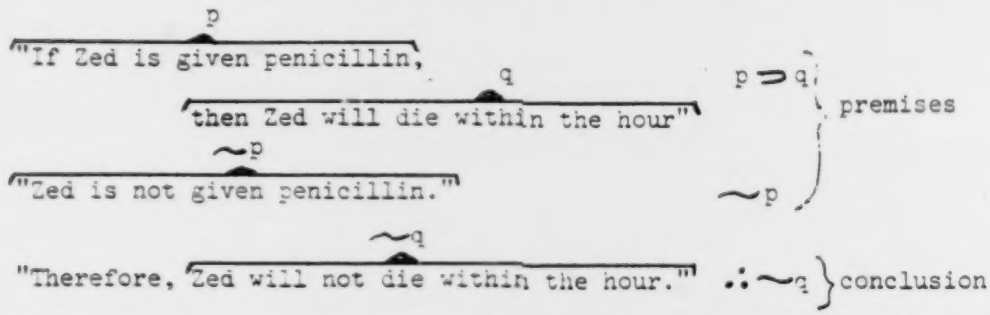
1. Not the same as method in natural and social sciences
   a. How derive from philosophy
   b. An on-going process; facets of this process
2. Follows "rules of inference"--distinguish logical from illogical
   a. Distinguish valid (logical) inference forms from invalid or fallacious (illogical) inference forms

(continued)

b. Example of valid arguement form, mo s tollens (denying the consequent):



c. Example of an invalid argument form - fallacy (denying the antecedent):



Note that the conclusion does not follow from the (truth of) the premises: Zed might be hit by a truck, have a heart attack or anyone of dozens of other things could happen to Zed that could result in his death.

3. Philosophers have greater problems with arguments that are "not obviously sound."
   a. To be decisive, an argument must be both valid and sound.
   b. An argument is valid if its conclusion cannot be false unless one or more of its premises is/are false; if the premises are true, the conclusion must be true.
   c. An argument can be valid even if its conclusion or premises are factually false (ref.: "a valid argument cannot have a false conclusion unless one or more of its premises is/are false" and if the premises are true, the conclusion must be true. Note that this does not say that the premises or conclusion ARE true but only that IF the premises are true, then the conclusion must be true.)
   d. A valid argument that has all true premises must have a true conclusion.
   e. A sound argument is: (i) a valid argument
      (ii) that has all true premises and a true conclusion
   f. Most problems are encountered by philosophers on the question of the soundness of arguments, not on the question of the validity of arguments.

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[REM]

FIRST SEMESTER 1987-88

Mo.	Wk	S	M	T	W	Th	F	S	
Aug.								29	
		30	31						
Sept.	1			1	2	3	4	5	Classes begin for all T-1
	2	6	7	8	9	10	11	12	Formal Convocation Th-10
	3	13	14	15	16	17	18	19	Last Day CR/No CR - M-14
	4	20	21	22	23	24	25	26	
	5	27	28	29	30				
Oct.						1	2	3	
	6	4	5	6	7	8	9	10	Homecoming Sat.-10
	7	11	12	13	14	15	16	17	[M-19-T-20 1st half sems exams;
	8	18	19	20	21	22	23	24	F-23 No classes; MIDS due ! S-24 Parents' Day
	9	25	26	27	28	29	30	31	M-26 WQT, Frosh Seminars
Nov.	10	1	2	3	4	5	6	7	Sat.- 7 Bd. Trustees Mtg.
	11	8	9	10	11	12	13	14	
	12	15	16	17	18	19	20	21	16-20 Registr for 2nd Sems.
		22	23	24	25	26	27	28	[F-20 @ 4 to M-30 @ 8 a.m.
	13	29	30						Thanksgiving Vacation]
Dec.				1	2	3	4	5	
	14	6	7	8	9	10	11	12	
	15	13	14	15	----------	----------	----------	----------	T-15 last day of classes
				16	----------	----------	----------	----------	W-16 Reading Day
						17	18	19	----17-19 Exams; M-21 Grades due
		20	21						

J-Term (Jan. 4-29)
January 25-26 Senior Comps--Writtens
27-30 Comps---Orals

Second Semester 1987-88

Mo.	Wk	S	M	T	W	Th	F	S	
Feb.	1		1	2	3	4	5	6	Classes begin for all M-1
	2	7	8	9	10	11	12	13	Formal Convocation Th-11
	3	14	15	16	17	18	19	20	--F-12 Last Day CR/No CR
	4	21	22	23	24	25	26	27	
	5	28	29						
Mar.				1	2	3	4	5	Th-3 Founder's Day
	6	6	7	8	9	10	11	12	WQT - Soph. & Jr.
	7	13	14	15	16	17	18	19	F-18 Last class, 1st half
		20	21	22	23	24	25	26	[F-18 @ 4 to M-28 @ 8 a.m.
	8	27	28	29	30	31			Spring Vacation] 22 MIDS Due!
Apl.							1	2	
	9	3	4	5	6	7	8	9	
	10	10	11	12	13	14	15	16	
	11	17	18	19	20	21	22	23	Th-21 Honors Day, Convo
	12	24	25	26	27	28	29	30	25-29 Registr for 1st Sems.
									30 @ 8 a.m. Rdg Per. for Srs.
May	13	1	2	3	4	5	6	7	M-2 Grades for Srs. tkg Comps.
	14	8	9	10	11	12	13	14	<9-10 Comps; 11-14 Oral Comps.>
									13 Grades for Srs J-Comps & Last Day of Classes
							153		
									14 Alumni Day
	15	15	16	17	18	----------	----------	----------	16-18 Final Exams
						19	----------	----------	Final Faculty Mtg
							20	-------	Trustees Mtg; Baccalaureate @ 8
								21	-----Commencement @ 10 a.m.
		22	23	-Grades Due					

L. Discussion Questions: What is Philosophy?

1. What justification is there for saying that our age is facing unprecedented problems? Are these problems any different, except in degree and intensity, from the problems faced by past ages? What contemporary conditions or trends do you consider encouraging and which discouraging?

2. Why does each person need a philosophy? Can one really choose whether he/she is to have a philosophy of life?

3. What justification can you give for saying that some of the great issues of our time are philosophical problems? In what sense are some of these issues timeless?

4. Has your secondary and college education developed in you any set of convictions or values regarding your personal life, social relationships, and the world in general? Should education be concerned with such questions or only with descriptive knowledge in specialized areas?

5. Indicate the extent and areas of your agreement or disagreement with the following statements:

   (a) "There is no more direct way of elevating our life than by elevating our ideas."--Ernest Dimmet.
   (b) "Make it thy business to know thyself, which is the most difficult lesson in the world."--Cervantes.
   (c) "Money buys everything except love, personality, freedom, immorality, silence, and peace."--Carl Sandburg.
   (d) "The great sickness of our age is aimlessness, boredom, and lack of meaning."--Dr. Dana L. Farnsworth.

6. How may one defend the statement that "philosophy is relevant to everyday living" or that beliefs and convictions are important for a person and a society?

7. What is meant by the statement that "civilization is basically a set of ideas and ideals"?

8. What are the crucial elements in a liberal arts education? Discuss the functions and tasks of philosophy in a liberal arts education.

(REM
Intro. to Philosophy)

Robert E. Myers, Ph.D.
Bethany College
Philosophy 100 Intro.

CONCEPTUAL GEOGRAPHY
DOMAIN OF DISCOURSE

Imagine that:

You are one of the few remaining ones, the elite, who have endured the rigorous training program and who are almost within reach of the honor to wear proudly the symbol that means so much: the SOS badge. You have one last, but crucial, test to complete successfully in order to become qualified as a Special Order Survivor.

Your briefing informs you that, in this last and crucial phase:

You will be blindfolded and flown to an undisclosed destination. Then, without warning, you will be ejected from the low flying plane to parachute into a country that is totally foreign to you. You will not know either the geography of the realm or the language of the domain; nor will the residents know your language. There are great dangers in this realm but there are pleasures and opportunities for fulfillment and special nourishment, also. You must devise the means to tell the difference between these and a means to communicate with those beings who/ that reside in this territory.

Your challenge: find nourishment, for you will have no supplies of familiar food or water; avoid the life threatening dangers that are in this domain; and communicate with the residents of the realm--they may be quite dangerous at times, especially if provoked by unseemly behavior. In a word: survive!

You do have certain resources: your training, which includes the general rule (postulated & © by REM) that most languages and thought systems can be decoded by discovering how communicating beings interrelate TERMS (words), THOUGHTS (concepts), and THINGS (entities, referents); your experiences of sense and reason and feeling; your wits, and, of course, your urge to survive.

. . . . . .

So it is

or so it must seem to those of you who come for the first time to the realm of philosophy, a domain that must seem totally foreign to you. You will travel rapidly through several regions of this territory and find that each region has its own special dialect, its specialized terminology or modification of the basic language of the country of philosophy. In order to find your way around you need to discover or to develop at least a rough sketch of the geography of this conceptual domain--you need to know the CONCEPTUAL GEOGRAPHY. A fairly bright resident willing to serve as a guide would be quite helpful to you, if you could solve the problem of how to break through the language barrier.

However, your rigorous training in the efficient use of time and resources is paying off. In that brief paracnute drop, after you ripped off the blindfold, you were able to glimpse the most dominant conceptual landmarks or separations of the regions and, by the time you landed /at the end of the "Introduction" chapter/, you realized that the country of philosophy was subdivided into the regions of:

Axiology [Normative Ethics, Aesthetics, Social & Political Philos.]
Epistemology [study of, Theory of Knowledge]
Metaphysics [study of, Theory of the basic nature of reality]
Logic [study of patterns of inference, deductive & inductive]
Metastudies, Philosophies of [disciplines], & Applied Philosophy
History of Philosophy

But you land-rolled just inside the border of the region known as Epistemology or Theory of Knowlege [Chapt. 1] And, in order to find your way around this region, to understand what is being said, described, discussed or evaluated, you must discover the mode of discourse used in this realm. (Let us accept the phrase that residents of philosophy use to refer to language peculiar to a given area: DOMAIN OF DISCOURSE.) You will use the discourse of this domain to sketch a general conceptual geography of the area and of the operations that are performed here; in this first visit you will miss many of the features of the area, but you will discover certain conceptual mountain peaks and valleys and certain conceptual deserts.

At this point, let's assume (1) that somehow you have managed to conquer the basic language problem, (2) that a resident of the region of Epistemology, country of Philosophy, has agreed to serve as your guide and mentor, and (3) that the two of you are dealing with the conceptual problems--often more difficult than simply learning to repeat the right words or sounds. (Although you must face certain problems, you are more fortunate than one of your colleagues. He was blown off course from his intended landing site by a Big Wind, landed outside a fertilizer plant in a collection tank full of male bovine excrement and happily but mistakenly believes that he has discovered "the territory of philosophy."

With the gentle assistance of your mentor, you discover that the residents of the region of Epistemology are primarily concerned with finding logically defensible answers to such problem questions as: What can I know for certain? Is knowledge possible? What is the standard (or criteria) for knowledge? For truth? For certainty? What are the sources of knowledge? What kinds of knowledge can I have? How can I explain error?

Before answers to many of these questions can be posed, they must answer a logically basic and fundamental question, namely: What is knowledge?

Many residents of the region of Epistemology agree that claims to know (what they call "knowledge-claims"), in order to really be knowledge, must satisfy the three criteria listed below in II.A. of the general "map" of the territory.

PART ONE A Rough Sketch of the Territory of Epistemology

I. Range & Significance of Epistemology
   A. Kinds of concerns
   B. Who has or should have epistemological concerns?
   C. Why this area is basic to study and action in other areas: knowledge-claims and epistemic assumptions are at the base of every other area of study and aspect of life

II. Knowledge and Criteria
  A. Significance and Use of Criteria (C.S.=Criteria Set)
    1. What I claim to know must be <u>true</u>.
    2. I must <u>believe</u> that what I claim to know is true.
    3. I must be <u>fully justified</u> in believing that what I claim to know is true (there is no reason to suppose that I might be wrong in believing that what I claim to know is true).

III. Skeptics, Total Skeptics, Solipsism
  A. We have no knowledge in some given area, e.g. area X
     Or, there is something that we do not know.
  B. We have no knowledge in any area.
  C. There are no existents but me, no knowledge but mine.

IV. Three Responses to Skepticism & their Relation to the Criteria Set
  A. Foundationalism
     --Certain knowledge-claims are fully justified (C.S.3) and have the status of certain axioms. From these certainties we can infer other things equally certain and thus can, from these foundation blocks, build a system of thought that is completely justified.
  B. Fallibilism
     --Criterion 3 is unrealistic and not what we mean by knowledge. "Such certainty is not required of most, if not all, of the actual claims of knowledge that we would call legitimate." As a matter of fact, most of what we call knowledge works out quite well even though it is possible that it might turn out to be wrong. This kind of knowledge is fallible, not absolutely impossible of being wrong.
  C. Direct Realism
     --We have direct knowledge of things, physical objects; we are not, as the skeptics insist we are, forced to infer the existence of objects from the shaky data of our experiences. We know directly the world around us and what we know it as is the way it is. There is no problem here, for our direct knowledge is reliable and there is no room for skeptical doubts.

PART TWO Science Fiction Short Story
  "The Welfare Department" by R. Gaines Smith.

PART THREE Philosophical Essay
  "Descartes' Evil Genius" by O.K. Bouwsma.

PHILOS. 100 Assignment #1 related to Chapt. 1 - Epistemology

Your first "thought-and-writing" assignment is to analyze, to complete a critical evaluation of, another person's written work: a philosophical essay included in the text, O.K. Bouwsma's "Descartes' Evil Genius." REMEMBER that a "critical evaluation" includes TWO aspects: positive (strengths) as well as negative (weaknesses)! Your first writing assignment, then, is to evaluate the written work of another person on the basis of the same criteria upon which your written work will be assessed.

Refer to the Syllabus, Section F. 3. "Usual Procedure: Minimal Guidelines for Thought-and-Writing Assignments." There you will discover--hopefully, will have discovered, already--a list of definite features, and comments upon those specific features, that a "good" essay or article should embody: a theme; a thesis statement, which may be one sentence or several; generalizations related to and elaborating the theme or thesis; appropriate illustrations or examples that provide the necessary details and support ("evidence") for the generalizations; the essay or article should flow from a beginning through a middle to an end; and it should close with conclusions that follow from evidence presented in the body of the essay or article.

You should expect and be able to find these features in essays and articles written by others, and certainly in published articles, if these works have been thought out well and written well. Keeping these features and expectations in mind, refer to Bouwsma's article.

1. It does have a central theme. After reading the article carefully, identify and state what that central theme or "point" of the essay is. What is it that the <u>whole</u> article discusses and explores?

2. Bouwsma states his thesis carefully and quite fully, although he hardly does so in a simple sentence. Find and identify his thesis and state it fully in your own words--or quote it, if you must.

3. Bouwsma uses two detailed examples or cases to illustrate and to elaborate variations of his thesis; he tells the reader what the "adventures" are to do and then uses them to <u>show</u> in detail what he has told us about them. Identify and explain the use he makes of each case. (Don't simply repeat everything he says in these cases.)

4. His article closes with a conclusion. What is that conclusion? How is it related to the two "adventures" and to his thesis?

5. Your conclusion: Reread the article and what you have written thus far, and write at least a page giving a summary of the reasons and "evidence" for your claim (thesis and/or conclusion) that Bouwsma's article is either well written or poorly written, that he makes his point clearly or does not make his point clearly.

NB: You should have this assignment in hand, at least in a legibly written first draft form, while we discuss the content and structure of Bouwsma's article in class. Following class discussion, you will have three calendar days to complete a revised (typed!) copy. Turn in <u>both</u> the original draft <u>and</u> the revised copy of your completed assignment.

PHILOS. 100 Assignment #2 related to Chapt. 2 - Philosophy of Religion

Ref. Copy of "The Genesis War" by Isaac Asimov and Duane Gish, from Science Digest (Oct. 1981).

Due to ethical and legal considerations associated with copyrighted material, please do not write or mark on the copies of this article for I will ask you to return them after we have completed this assignment.

This article is described as a debate between Asimov on evolution and Gish on creationism.

Tasks:

1. Take the copy home and read it carefully.

2. Write out a sketch of who says what, indicating points or steps these writers make in their "arguments."

3. How would you describe or explain to another person what the actual issue is?

4. Using the rules, concepts and techniques we have studied, decide whether Asimov or Gish presents the strongest, most logically defensible argument.

5. Explain the basis of your decision: on what basis do you or did you decide that Asimov or Gish makes the strongest argument in this article?

6. Which position do you or someone you know believe to be more correct, regardless of the strength of the argument presented in this article?

7. Ref. #6: Why? Explain why this is the case. For what reasons?

8. Or, is there a better alternative position on this issue, one that is not presented in the "debate" in this article? If so, identify and explain what that position is.

After you have completed this assignment individually, you will meet in small groups in class to discuss your responses with others. Then we will ask for group reports concerning what happened in your work with the assignment and within your group discussion.

And then we will discuss what bearing this kind of issue has on the area of philosophy of religion and its primary concerns.

You will have three calendar days to revise your original written work and turn in both the original draft and the revised copy (typed). On a separate sheet, indicate any major conceptual or evaluative changes that have occurred for you anywhere along this process, and explain why, in your critical opinion, this is the case.

PHILOS. 100 Assignment #3 related to Chapts. 4 and 5

Chapt. 4 "Philosophy of Mind: Men and Machines: Is there any difference?"
Chapt. 5 "The Problem of Personal Identity: What are the principles of personal identity?"

THEME of this paper: the issue of whether/how human beings and machines are significantly different and how the principles of personal identity are relevant to resolve this issue area.

THESIS: clearly adopt a position on the theme/topic and then move to support that thesis by elaborating its strengths and its adequacy to solve or resolve the issue. Answer satisfactorily any weaknesses or objections to which your position is open. And as your CONCLUSION (which should be related to the thesis), draw the conclusion that is justified on the basis of the evidence and argument presented in the body of the paper. Relatedly, clearly identify an opposing (alternative) position that is inadequate to resolve the issue and elaborate that alternative position's weaknesses. This should be dealt with relatively early in the paper, or introduced fairly early.

FURTHER STRUCTURAL ANALYSIS:
Ref. Syllabus page listing and explaining "Minimal Guidelines for Thought-and-Writing Assignments." We've invested quite a bit of time and class time elaborating these features, their meaning and significance. For this paper, label clearly, in the left margin, THESIS, GENERALIZATION(S), supporting EXPLANATION/ILLUSTRATIONS/EVIDENCE, CONCLUSION, according to the appropriate parts of YOUR paper.

BASIC RESOURCES INCLUDE:

The Conceptual geography of Chapts. 4 and 5
"For A Breath I Tarry" by Roger Zelazny
"Evidence" by Isaac Asimov
"With Folded Hands . . . " by Jack Williamson
"Nine Lives" by Ursula K. Le Guin
"The Meeting" by Frederik Pohl and C. M. Kornbluth
"What Is It Like to Be a Bat?" by Thomas Nagel
"Will Tommy Vladek Survive?" by John Perry

AUDIENCE: Assume--
(1) that your audience consists of the other members of the Intro. to Philosophy class;
(2) that they (all) have read all of the material listed above, including chapter introductions, correlated SF stories and critical articles;
(3) and that they have been participants in all classes where and when these materials and related issues have been presented and discussed.

--as you write and review your paper, consider:

Can your audience understand what position you declare to be inadequate and/or incorrect and why (on what grounds, or evidence) you are justified to claim that it is inadequate or incorrect?
Can your audience understand what your position is and why (on what grounds or evidential base) it is strong enough to support the claims you make for it in your thesis and conclusion?

PHILOS. 100 Assignment #4 related to Chapts. 6 and 7 - Free Will and Determinism
- Value Theory

Assume the ROLE of one of the major characters in one of these sf short stories: Robinett's "The Satyr" or Godwin's "The Cold Equations." IDENTIFY with that character, so that you take on his or her personality and think and feel just as does that character.

Remaining consistent with this character's personality, thought, feeling and behavior--which are now yours!--go beyond the stories themselves to portray how YOU NOW deal with the problems of "free-will and determinism" and "value-decisions of right/wrong and good/bad" and how or whether one can "know what is right or wrong."

Make use of any of the positions or materials that are presented and discussed in these chapters to construct or elaborate your portrayal but do not simply reproduce the stories presented in these chapters.

Here's your chance to "be creative." Deal with the issues but instead of writing the traditional analytic/synthetic paper, do so by developing a consistent role portrayal of the character you select and, for the purpose of this paper, the character you become.

Return this assignment sheet with your completed paper.

Completed assignment due in class within seven calendar days from the time this assignment is distributed.

ENG 322
AMERICAN LITERATURE

THE CRACK-UP OF

NARRATIVE

SPRING
88

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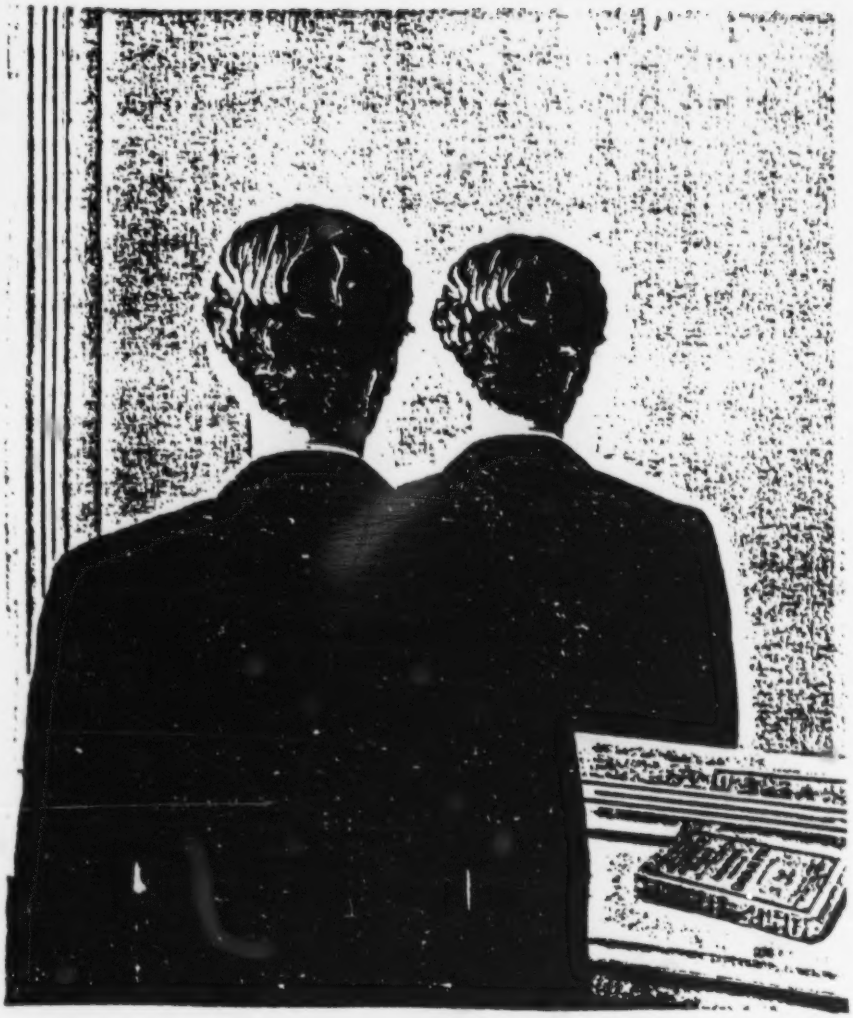
Heidelberg College
Tiffin, Ohio 44883



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Syllabus and Study Guide for
English 322: American Literature, The Crack-Up of Narrative
Spring 1988

Text: The Norton Anthology of American Literature, Second Edition; Volume 2.

Professor: Dr. Nancy Siferd
Professor of American Studies and English
Executive Director of East Central Colleges

Office: Pfleiderer 202, 11-12 M-W-F
College Hall 213, 1-5 M-F

Phone: Office - 2047; Home - 448-0476, before 10:00 p.m. only

Classroom: Pfleiderer 103 Hour: 10:00 a.m. M-W-F

Tests:		In-Class Papers:	
	Wednesday, February 3		Monday, February 1
	Wednesday, February 24		Friday, February 12
	Friday, April 8		Wednesday, April 6
	Tuesday, May 10, 1-3 p.m.		Friday, April 22

Goals:
1. To become familiar, as active readers, with certain American authors and some of their works. Active readers read a text closely, with pen in hand, making notes in the margin to summarize events, to remark on character traits, to spot recurrent word choices reflecting authors' deliberate or unconscious purposes. The study questions help you notice such things.
2. To understand basic tenets of Realism, Naturalism, Imagism, and later contemporary schools of literary thought and practice.
3. To trace the interrelationships among these patterns of thought and then to link with this historical base the diverse and often highly abstract patterns of contemporary literature, where a coherent and linear progression (a story line) is shattered.

Policies:

Attendance--Every unexcused absence over 3 will deduct 1% from the final grade. Attendance will be taken daily. The reason for this policy is to encourage active learning by each individual and as a group. We need to be able to rely on each other and on ourselves to accomplish this end.

Makeups--There will be no makeups for in-class or out-of-class journal entries or for individual research reports. Alternate assignments will be created for excused absences only and only when sought very promptly by the student. Makeups for tests will be granted only in the event of rare and true emergencies. Coursework never completed earns a double "F" on that component of the final grade.

Participation--Thoughtful and attentive listening, a willingness to share responses to the reading through oral or written comments, faithful attendance, prompt completion of reading and writing assignments--these behaviors will factor into an impressionistic grade for participation.

Tests--Tests will consist of about 1/3 to 1/2 "objective" questions (matching, identifications, remarks on quotations from readings). The essay portion will consist of one or two questions, usually both incorporating choice. The focus of these is usually integrative --ie, comparing/contrasting themes, characters, or structure. Sometimes you might

be asked to comment on how a particular passage quoted is (not) typical of an author or a period. Essays are evaluated for incisive range rather than for puffed-up verbiage.

Grades:		
	4 tests	40%
	4 in-class papers	28
	journal	20
	report	4
	attendance and participation	8
		100%

Assignments for the Supplemental Writing Component

You will be asked to keep a journal throughout the semester. Please buy a pocket notebook in which you can keep your entries in order, and bring the notebook to every class. The reasons for the journal are several:

you learn most lastingly what you yourself discover;

you will feel more confident sharing your insights with classmates if you've done some thinking before class;

interpreting literature--or the act of reading--becomes more deliberate when you also write.

*The *journal entries*, to be written about every other class day, are sometimes lists, sometimes a paragraph or two, sometimes 1-2 pages. Usually the task is to analyze the text for the day. Occasionally you are asked to write something personal. You will be asked to write additional entries in class, unannounced, in 5-10 minutes of class time. In the journals regularity of reading and fullness of thinking count for more than sentence style. Journals will be collected periodically for written comment, but will be graded only at midterm and at the end of the semester.

I will have abundant opportunity to note during most class periods whether you have written the day's journal entry because you will read each other's entries or draw upon your day's writing for class discussion. Do not procrastinate on these. Do write in ink; you may cross out phrases you wish to change without recopying; leave margins; write on one side of the page only; use white paper. Date the day's entry.

**The *individual research report* is a 1-2 page journal entrys which involves mostly close reading of some assigned material but occasionally of library material. This journal entry will be due the day of your report. Feel free to talk with me about your report before you give it. I'll be happy to offer help. You should refer to your report (but not read it) in a 5-minute presentation to the class. The report will be evaluated for clarity, interesting delivery, and useful information or insight. You should not overload the report with detail and should consider using the blackboard or some other means of getting your point across with effect.

***The *in-class papers* are extended journal entries and also serve as essay questions that preface our tests. That is, because you prepare materials for the papers, we do not have to cover so much on tests. You may revise these papers to improve the grade up to one letter. These papers will be graded for both clarity and quality of thought, as well as for organization. As the course unfolds, you will have opportunity to see some model journal entries or in-class essays, to read some from your peers, and to discuss strengths or weaknesses in samples.

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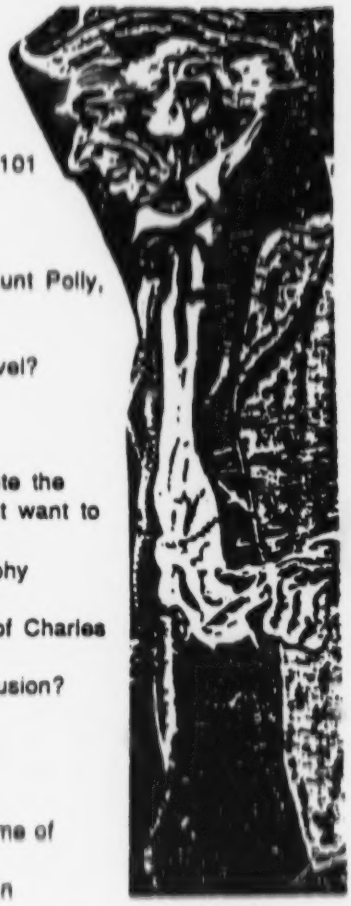

I. Realists: Beneath the Illusion

January 11 Introductions

January 13 Mark Twain, Adventures of Huckleberry Finn, 26-101

a. What illusions does Tom Sawyer promote?
b. Does Jim instruct Huck in illusion or truth?
c. Are Huck's parental figures purveyors of illusion (Miss Watson, Aunt Polly, Pap, the judge)?
* d. Journal: Write a page on a or b or c.
e. In what illusions does Huck still believe in the early part of the novel?

January 15 Mark Twain, 102-176

** a. Report: Is the river a place to cultivate or to correct illusion? Note the role of the Walter Scott in relation to this question--you might want to check the encyclopedia.
b. Is Cairo an illusion? Where, exactly, is it? How might its geography suggest illusion?
c. What truths of the American frontier are revealed in the tall tale of Charles William Allbright?
* d. Journal: How do the Grangerfords and the Shepherdsons live in illusion? Write a page.

January 18 Mark Twain, 177-250

a. How do the duke and the dauphin take the novel deeper into the theme of illusion?
b. How does the tale of Boggs reveal the stark reality of the American frontier?
c. When Tom shows up again, does he show that he's learned to distinguish truth from illusion? Does Huck?
d. Journal: Are Uncle Silas and Aunt Sally good and wise people? List five reasons why he or she is and five why he or she is not.

January 20 Bret Harte, "The Outcasts of Poker Flat," 269-278
William Dean Howells, "Editha," 301-312
Ambrose Bierce, "Chickamauga," 313-319

** a. Report: How does Harte's story refuse to destroy sentimental illusions?
b. What external resources help Editha nurture illusions of war?
c. Why does Bierce make the child handicapped?
* d. Journal: Imagine that somehow Editha and Bierce's young boy confront each other just after the ending of each story. Write the remarks that Editha might offer the boy.

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January 22 Sarah Orne Jewett, "A White Heron," 462-471
Mary Wilkins Freeman, "A New England Nun," 599-609

* a. Journal: What differing roles for women do the two animals in Jewett's story represent? Write a page.
b. Is the young man's failure to get the heron illusionary?
* * c. Report: What differing sexual notions do the dog and the canary suggest in Freeman's story?
d. How is Lily Dyer's name symbolic? Is Joe Dagget's name symbolic?
e. Does Louisa live a life of illusionary happiness or of realistic resignation?

January 25 George Washington Harris, "The Wonderful Tar-Baby Story", 448-449
Charles Chesnutt, "The Goophered Grapevine," 621-630

a. What illusions does Uncle Remus embody in his role as storyteller to white children?
b. What truths do black people perceive in the tale?
* c. Journal:Make a list of ten words in Chesnutt's tale that seem "white" and ten others that seem "black".
* * d. Report: Is Junius a trickster? Is Rabbit? Look up "trickster" in Leach's Dictionary of Folklore.

January 27 Henry James, "The Beast in the Jungle," 394-430

a. What is Marcher's illusion about himself? About May?
b. When does May see through John's illusion? When does he?
* c. Journal: How is John the beast? How is May? Make a list of 5-10 references to "eyes," "fire," "lamps," and "stirrings" for clues as to the presence of the beast.
* * d. Report: How does "The Jolly Corner" reveal that the beast is repressed sexuality?

January 29 Henry James, Daisy Miller, 323-348

a. What illusions about Europe does Daisy have?
b. What illusions about America do she and her brother have?
c. Journal: Write a letter from Miss Manners or Dear Abby/Ann Landers advising Daisy on the illusions which she should shed and why.
d. What sort of reality does Mrs. Costello represent? Eugenio? Gi ovanelli?

February 1 Henry James, Daisy Miller, 349-373

a. Is Winterbourne a romantic fool? A cowardly wimp? A mature man of experience?
b. What contrasting "truths" do America and Europe represent in this story? Why should Daisy's story end in Italy, precisely where it does?
c. How is Daisy Miller like Daisy Buchanan in The Great Gatsby? Is Winterbourne like Nick Carraway? Would Randall grow up to be Jay Gatz?
d. In-Class Paper:

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* * * d. **In-Class Paper: Prepare to write an essay describing American characters as those who prefer illusion and European characters as those who weave networks of reality.**

February 3 **Test I**

II. Naturalists: The Disappearance of the Individual

February 5 Hamlin Garland, "Under the Lion's Paw," 631-642
Jack London, "Law of Life," 814-819

* a. Journal: Make a list of all the different animals to which Gailand's story refers.
b. Note in both stories how the land itself has enough force to become a character--it shapes the plot.
Journal Due

February 8 Kate Chopin, The Awakening, 481-530

a. How do the sea, the sun, the moon interact as forceful presences among the characters?
b. What varied animals appear in the story and with what recurrent suggestions?
* * c. Report: What minor characters appear and reappear in roles that fail to individualize them?
* d. Journal: What values are more important to Leonce than individuality? To Adele? Write a paragraph on each character's values.

February 10 Kate Chopin, The Awakening, 531-588

a. Why doesn't Mlle Riesz fit into the Cajun culture?
b. Is Robert an individualist? Is Arobin? Is Mariequita?
* c. Journal: Write a page analyzing why Edna enjoys going to the horse races.
d. Is Edna's end a victory? A tragedy? For the individual? For the culture?

February 12 Charlotte Perkins Gilman, "The Yellow Wallpaper," 644-658

a. How are the problems of the women in this story very like Edna's problems?
b. Note the descriptions of the patterns in the wallpaper. Why is the main character so fascinated by the repetitive, flat pattern? What forces are represented in the wallpaper?
* * * c. **In-Class Paper: Prepare to write an in-class paper comparing the image clusters in The Awakening and in "The Yellow Wallpaper" for their suggestions of deadening routine.**

February 15 Edith Wharton, "Summer" (90-minute video) and "Edith Wharton's Life" (60-minute video), on reserve

a. What forces prevented Wharton from pursuing happiness in her own life?

* * b. Report: How does Charity make outer Edith's own inner drives?
* * c. Report: The landscape of North Dormer contrasts in what sort of appropriate ways with Edith's house? With the European scenes?

February 17 Stephen Crane, "An Experiment in Misery," 713-722, and "The Open Boat," 722-741

a. Why do none of the men in Crane's story have names?
* b. Journal: The sea, the land, the shark, the tower--what sort of cosmos do these suggest? Write a page.
c. The glowing descriptions that end the story temper its pessimism. In what exactly does Crane place his hope?
d. Does "An Experiment on Misery" offer any reason to hope?

WILLA CATHER

February 19 Ellen Glasgow, "The Difference," 891-909
Sherwood Anderson, "I'm a Fool" (50-minute video), on reserve

a. How does Glasgow's story seem old-fashioned to you--more realistic than naturalistic?
b. Are these characters and their lives utterly inconsequential?
* * c. Report: How does Anderson's "I'm a Fool" contrast a black world of seasoned experience with a white world of naive dreams?

February 22 Willa Cather, "Neighbour Rosickey," 946-971

a. What pleasures of the city are known to Rosickey's family?
b. What are the pleasures of the countryside?
c. How is Rosickey's hand both a naturalistic symbol and a mark of his truimph? Is it the triumph of an individual?
* d. Journal: Draw a picture of his hand on one-quarter of a page. Draw a picture in each of the other quadrants illustrating other characters.

February 24 **Test 2**

III. Imagists: To Things Alone

February 26 Ezra Pound, "High Selwyn Mauberly," 1129-1137
H.D., "Oread," "Heat," "Leda," 1157-1158

a. How do HD's poems embody the doctrines of imagism?
* b. Journal: Describe H.S.M. in terms of his job, his interests, his friends, the times. Write a page.
* * c. Report: Consider the shattered form of Pound's poem--how is it like a Cubist painting?
Journal Due

February 29 T.S. Eliot "The Love Song of J. Alfred Prufrock," 1196-1200
"The Waste Land", 1210-1215

EZRA POUND

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T.S. ELIOT

- a. Journal: What things surround J. Alfred Prufrock? Make a list; then write 2-3 summary sentences describing his world.
- b. How are people reduced to objects, in Prufrock's experience?
- c. In "The Wasteland" were people of the past similarly reduced?
- d. Trace the poem's geographic movement--from one scene to another.
- e. Trace the poem's movements--from youth to age, from high class to low, from tawdry to romantic, and so on.

March 2 T.S. Eliot, "The Waste Land", 1215-1225

- a. Journal: Trace the poem's repetition of the same story--again and again the fall.
- b. Does the poem end with a promise of redemption?

March 4 Robert Frost, "A Servant to Servants," 1014-1018; other poems, 1004-1007,1018-1020

- a. In which poems does Frost seem the imagist who values absolutely concrete depiction of things and beings?
- b. Journal: In which poems does Frost characteristically shift from the familiar and concrete object to recognition of the object as strange avenue to insight? Write a page, focussing on one poem.
- c. Report: Try reading aloud some portion of one of Frost's long poems.

March 21 Robert Frost, poems on 1021-1031

- a. Journal: What sorts of animals recur in Frost's poems and why? Write a page, focussing on two poems.

March 23 Wallace Stevens, poems, 1074-1076,1079-1081

- a. Journal: Why does Stevens reject Christianity in "A High-Toned Old Christian Woman"? Write a page making exact connections between your remarks and lines of the poem.
- b. Report: What non-Christian view of the cosmos does "The Snow-Man" or "The Emperor of Ice Cream" present?
- c. What is the role of art for Stevens, as shown in "Anecdote of the Jar" or "The Idea of Order at Key West" or "Study of Two Pears" or "Of Modern Poetry"?

March 25 William Carlos Williams, poems on 1086-1088, 1090, 1092-1094.
EE Cummings, poems on 1391-1396

ROBERT FROST

- a. How is Williams' training as a doctor manifest in "Queen-Ann's-Lace," "Spring and All," "The Dead Baby"?
- b. By what exact means do the imagist poems accumulate power and pleasure--"This Is Just to Say," "Classic Scene," "The Term"?
- c. Journal: Make a list of the oddities in punctuation, spelling, indentation, and so on in one of E.E Cummings' poems. Then comment in a paragraph on whether these are truly functional or gimmicky.

or

I Love Myself

MARIANNE MOORE

* d. Journal: Find among the assigned poems a satiric one. Explain exactly how you know it's satiric.

March 28 Edna St. Vincent Millay, poems on 1373-1376
Marianne Moore, poems on 1182-1189

* a. Journal: How does the content of Millay's poems express the Jazz Age?
b. How does the form deny the Jazz Age?
c. How does the form of Moore's poems express the Imagist movement?

March 30 Zora Neale Hurston, "The Eatonville Anthology," 1641-1657
Langston Hughes, "Dear Dr. Butts," 1661-1665
Countee Cullen, poems on 1678-1679

a. In what ways are Cullen's poems utterly conventional?
* * b. Report: What exact devices account for the humor of "Letter to Dr. Butts" and what links with the humor of earlier writers do ou see?
c. How is Zora Neale Hurston's voice utterly new in American literature?

ZORA NEALE HURSTON

April 6 Jean Toomer, Cane, 1414-1420
Richard Wright, "Almost a Man," 1747-1758

a. Toomer can be linked with the Jazz Age in what formal characteristic of his writing?
b. Wright's story continues the naturalistic strain in American fiction. How is this evident in the role of Jenny in the story?

* * * **c. In-Class Paper: Prepare to write an essay explaining how Toomer's jazz-like form and Wrights's naturalistic story both de-individualize characters, separating them from their historic communities.**

April 8 **Test 3**

IV. Root Origins: Reconstructing the Context for Narrative in Historic Community

April 11 F. Scott Fitzgerald, "May Day," 1447-1489

* a. Journal: What exact places make the geographic setting very real? What exact historical events make the chronological setting very real? List 5 of each with a brief description of each item.
* * b. Report: How do Edith and Jewel contrast with each other? Compare? Why is neither an appealing partner?
c. What is the impact of ethnic origins as sketched in this story?
Journal Due

April 13 William Faulkner, "Dry September" and "That Evening Sun," 1507-1531

hen I Am Laughing... 8 173

... And Then Again When I Am Looking Mean and Impressive

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Papa Hemingway

a. How are the white women (including girls) in the two stories similar? How do they differ from black women and why?
b. How are white men (including boys) in the two stories similar? How do they differ from black men and why?
• c. Journal: Examine closely how the 5/6-part division of each story causes one segment to comment on another. Write a page on the relationship between at least two parts.

April 15 Ernest Hemingway, "The Snows of Kilimanjaro," 1538-1561

a. In what varied ways is Harry's failed career as a writer represented in the story?
• • b. Report: Read the entry in The Encyclopedia of Philosphy on Heidegger as a gloss analizing Harry's inablity to become.

April 18 Eugene O'Neill, Long Day's Journey into Night, 1237-1322

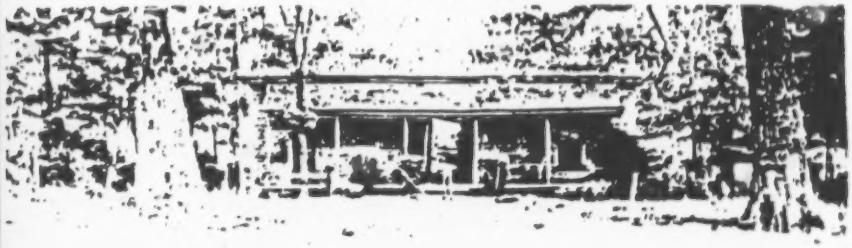
a. How is Mary like women in other novels or stories we have read?
• b. Journal: What is each character's art? What has spoiled the art of each? Write a page.
c. What physical props externalize the characters' inner emotions?
d. What similarities to a Shakespearean tragedy does this play have? To a Greek tragedy? How is it different from either?

April 20 Tennessee Williams, A Streetcar Named Desire, 1774-1841

• a. Journal: Describe the qualities that make Eunice and Stella "normal." Is Mitch's mother also normal? What qualities make Blanche "abnormal"? Write a page on one or two of these women.
b. Describe the qualities that make Stanley "normal." Is Mitch "abnormal"? Is Steve?
c. What thematic function do you see in references to French or Polish heritage? To Spanish phrases?
• • d. Report: What are the funcitons of music throughout the play?

April 22 Arthur Miller, Death of a Salesman, 1981-2053

a. How are the father/son relationships in this play like /unlike those in O'Neill? How do Charley, Stanley, or Uncle Ben extend the scope of Miller's play?
b. How do Bernard and Wagner?
c. How do Miss Forsythe and the woman?
d. What are Linda's strengths?
e. Willy's car, the refrigerator, the garden--how do these objects resonate in the play?
• • • f. **In-Class Paper: Prepare to write an essay which shows Willie's failure to be the failure of the larger community, not of the individual.**



TOCCOPOLA

ARTHUR MILLE

"A weathered primless dog trot cabin" (The Mansion, p. 209).

John Barth

April 25 Flannery O'Connor, "Good Country People," 2138-2154

* a. Journal: How do names, remarks, descriptions, and events prevent us from believing this story to be true-to-life?
  b. In what ways is Hulga "saved" over the course of the story?

April 27 John Barth, "Life-Story" 2156-2166
Alice Walker, "Everyday Use," 2237-2247

a. Barth writes the story of a writer who can't write a story. Describe what the problems are by considering part 1 as description of the teller, part 2 as the tale, and part 3 as an attack on the reader.

* b. Walker's story unwrites the sophisticated story which she would make of her life and replaces it with the "natural narrative" that Maggie and her mother live. Explain in a page.

April 29 Theodore Roethke, poems on 2268-2270
Robert Lowell, poems on 2350-2352

* a. Journal: Roethke's poems and Lowell's reflect autobiographical confessions--the circumstances of their lives are woven in the tapestry of their poems. Describe the life of each in a paragraph and link each lifesketch with 2-3 poems.

May 2 Anne Sexton, poems on 2517-2519
Adrienne Rich, poems on 2529-2534, 2536-2540, 2543-2545
Sylvia Plath, poems on 2563-2568, 2569-2571, 2572-2573

* * a. Report: Given the long, cumulative history of women's lives as reflected in the literature we've read, why do Sexton, Rich, and Plath have trouble creating life-stories for themselves?
* b. Journal: Look closely at one poem and explain how/why the persona makes concrete her struggle to be.

May 4 Richard Wilbur, poems on 2370-2374
Denise Levertov, poems on 2401-2405

* a. Journal: Comment on how one poem by Levertov or Wilbur solves a problem that some earlier writer in this course could not.

May 10 Test 4 (Tu., 1-3)
Journal Due

Fiction for Print, Tape, Live Voice

Lost in the Funhouse

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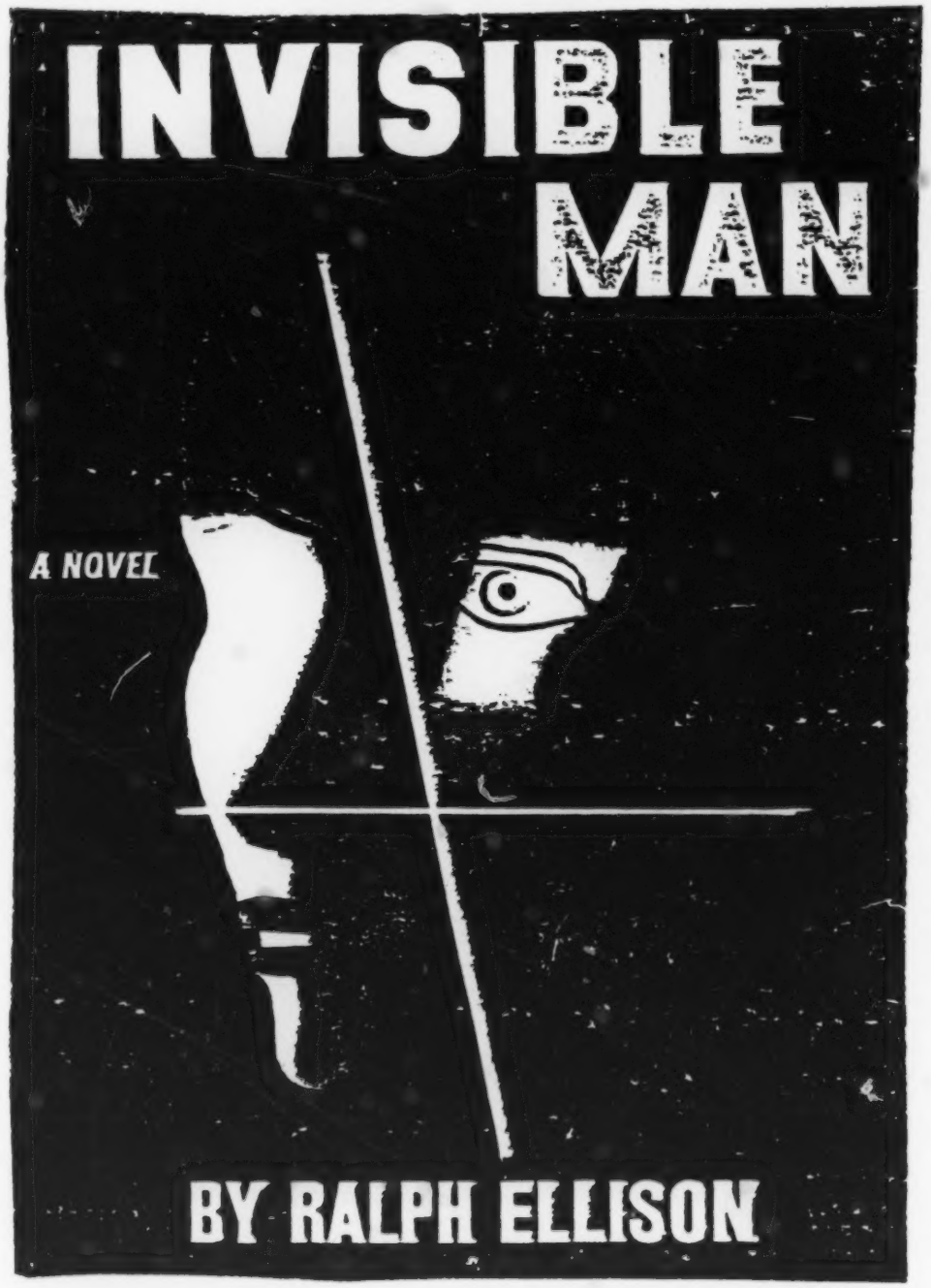
TENNESSEE
WILLIAMS

ENG 322



The Value-Focused Freshman Writing Course

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January 31, 1989

Course Outline

The Value-Focused Freshman Writing Course

Loyalty and Its Limits

Writing Sample: Aesop's "The Birds The Beasts, and the Bat"

Unit I: Family Loyalty

Genesis, "Joseph and His Brothers"
- narrative summary
- analysis

Jackson's "The Lottery"
- narrative summary
- analysis

Faulkner's "Barn Burning"
- narrative summary
- analysis

Synthesis Essay

Unit II: Racial Loyalty

Rodgers and Hammerstein's "You've Got to Be Taught"
- conceptual summary
- analysis

King's "Love, Law, and Civil Disobedience"
- conceptual summary
- analysis

Lee's TO KILL A MOCKINGBIRD
- narrative summary
- analysis

Wiesel's NIGHT

narrative summary
analysis

Synthesis Essay

Unit III: Religious Loyalty

Review of Materials:

Jackson
King
Wiesel

Sophocles' ANTIGONE
narrative summary
analysis

Synthesis Essay

Writing Sample: Fable on Loyalty

The Values-Focused Freshman Writing Course

I may as well state at the outset that what follows is a brief confession of faith as well as a description of one approach to teaching the often required freshman writing course. I believe that our first-year students come to our introductory writing courses--the ENG 101, Expository Writing I, course at Heidelberg College, for example--with a set of traditional values which are more or less completely formulated. I believe that our students hold these values to be important and are even willing to reflect upon them. I believe that the values which our students hold dear to them are also those values which the surrounding culture holds dear as well; thus, our students are ready, at least in part, to enter into the dialogue of their culture. If such a view is viewed by the few, or the many, as overly optimistic, perhaps these reflections which constitute a very personal approach to the critical task of teaching introductory may not be for them. For me, I am grateful for this pedagogical naivete. It allows me to think of my students as moral beings--if not the best of writers. If this were not disclaimer enough, I must also confess that--although these reflections and the syllabus which proceeds from them are the products of an NEH workshop on the incorporation of classic texts in introductory-level courses and a FIPSE faculty development program promoting critical thinking--my approach is largely intuitive, rather than based on many of the advances which have occurred in the field of rhetoric and composition over the past two decades.

A major concern for me, as for many who teach the required course in freshman writing, is the content around which to structure such a course. I have long wondered about the extent to which I should depend on my students' personal experience as content about which to write, depending upon them to recall from memory material rich enough to create an essay deserving of the claim. I have struggled over whether I should fall back upon structuring a syllabus around the traditional rhetorical modes of discourse, an approach which all too often emphasizes structure to the detriment of content and personal expression. I have at times attempted to make use of one the several process-centered writing strategems, such as the immensely useful work of Linda Flower. As I repeatedly have taught the introductory writing course I have come to realize the limited value of all these approaches, yet I could not help but feel the loss of a type of spirituality which--when writing courses are functioning well--seems to be a by-product of the process of learning to write. Because I firmly believe in my students' ability to not only reflect upon their values, but also to articulate them, entering into dialogue with their culture, I several years ago started structuring the ENG 101 course around a value-focused theme. Additionally, because classic texts--again, my view of what may be termed a

"classic" may seem too intuitive to some fac ulty--have always been used as tools to explore values, I have chosen a nu nber of such works for partial content of the course. Like many of my col eagues, I find that a combination of the appraoches mentioned above best su its the needs of my students, and such a combination of approaches is condus ive to the use of a variety of "literary" texts.

I believe that--while on some grounds I dis agree with the cultural conservatism which seems to be one of the hallmarks of intellectual life of the 1980's and 90's--the integration of class ic texts and values exploration into my freshman writing course can only b etter prepare my students to enter such an intellectual environment an better facilitate their ethical and moral development as well. There is curre ntly a voice crying in the wilderness of higher education that looks f or a richer substance in courses like the first-year writing course.

While my approach to teaching writing is i ntuitive for the most part, there are certain methods I follow in the creatio of such a course. I believe in the sequencing of assignments. Sequencing oc urs in two ways. First, I believe in moving from simpler to more challengin g assignments. This, of course, makes simple sense. Yet I am often surpri sed at instructors of writing who do not do this--either from lack of early p anning or lack of understanding of their students. Secondly, I believe that as signments can be "linked", one to another, for the students' benefit. For exa mple, one literary text can supply material for a narrative summary which c an then be integrated into a later comparative analysis. The use of a specifi c theme clearly lends itself to this type of assignment sequencing. I carefull y chose classic texts with this sequencing of assignments in mind.

The texts I gathered for the course ranged from Aesop to ANTIGONE, from the Genesis narrative of Joseph and his Br others to Rogers and Hammerstein's "You've Got to Be Taught", from Martin Luther King's "Love, Law, and Civil Disobedience" to Faulkner's "Barn Burning", from Harper Lee's TO KILL A MOCKINGBIRD to Elie Wiesel's NIGHT--a diverse anthology. I then devised reading, discussion, and writing a ctivities in three units based on these and other texts which centered on t he single over-arching value theme of loyalty: loyalty to one's family, loyalty to one's race, and loyalty to one's religion. The creation of an anthology of works like those mentioned above aids in solving the "content problem" of th e freshman writing course. It allows for considerable variety of materia l, and, as I was happy to discover, it provided entry for students to make us e of their own experience as the center for written exploration of the the v alue of loyalty. By choosing disparate texts which develop a common theme, I was able to link all the

reading and writing assignments into a cohesive pattern which--though students toward the end of the course rolled their eyes at the word "loyalty"--gave a sense of wholeness to the course.

The first activity that students completed in the course was to compose a brief narrative summary of an Aesop fable which develops a tale of divided loyalties, "The Birds, the Beasts, and the Bat," which I read aloud to them, and to write a brief comment on the moral of the fable. I used this as a writing sample to get a feel for the level of ability of the students and to give them a feel for the content of the course. After the writing sample, the course assignments became inter-related and sequencially arranged.

I sequenced assignments in the following manner. The first of the three course units explored the value of family loyalty and its limits. The three texts that I chose to examine with my students for this unit were "Joseph and His Brothers," Shirley Jackson's short story "The Lottery," and Faulkner's short story "Barn Burning." First, the class read the Genesis narrative of "Joseph and His Brothers"(Genesis 37-45). For most students in the class, the biblical narrative had the benefit of familiarity.

After reading the narrative, the students were asked to complete a narrative summary of the tale, condensing the several chapters from Genesis into a single formal summary paragraph, the characteristics of which we reviewed before they began their narrative summaries. I believe that appreciation for narrative and the ability to use narrative is so much a part of the human cognitive process that students approach the writing task which is based on narration with far less anxiety than other writing tasks. I read the narrative summaries and commented on their demonstration of weak or solid writing skills. While the narrative summaries were "required" and their fluency commented upon, they were not "graded" in the sense that a a a student's performance on them did not have any effect on his or her course grade. Their major purpose was to help develop fluency. In this, I suspect that I treated the narrative summaries as many teachers of writing treat journal entries. They were a "safe place" for students to test their understanding of the narratives which they were exploring without the anxiety of evaluation. Addtionally, composing a solid narrative summary on the narrative of "Joseph and His Brothers," for example, strengthened students' confidence as they went on to write an analysis of the limits of family loyalty in the Genesis narrative.

After I had read and returned the narrative summaries on "Joseph and His Brothers" and we had read representative examples in class so that all students had a clear basic understanding of the sequence of events in the

biblical tale, we went on to explore, in formal thesis-centered analyses, what the story says about the nature of family loyalty. The formal analyses which students write on the topic "What does the narrative of 'Joseph and His Brothers' say about the nature and limits of family loyalty" are graded for such things as logic and use of illustrating material as well and syntax and usage. Students considered such aspects of the story as whether or not Joseph was partially to blame for his being sold into slavery in Egypt, the role that Jacob plays in the narrative, and the outcome of the separation of the sons of Jacob. Generally, students see that family loyalty overcomes such obstacles as sibling rivalry, poverty, even near fratricide. The generally positive conclusions about the unlimited nature of family loyalty which occur in this essay were tested in the later texts in the unit on family loyalty.

The process of reading a text, discussing it, composing a narrative summary, reviewing the summaries, and composing a formal analysis was a consistent pattern in the three units. The process is repeated in the unit on family loyalty as the class considered two more narratives: Jackson's "The Lottery" and Faulkner's "Barn Burning." The narratives become both more difficult in reading level--this is especially true with the Faulkner--and, more interestingly, morally more ambiguous. Students have no trouble summarizing the plot of Jackson's grim little fable. They become uncomfortable when they are faced with the Hitchinson family's participation in the ritual stoning of Tessie Hutchinson--an act which has its basis in the culture (one could say the religion) of Jackson's fictional world. Students are then faced with the question of which demands their greater loyalty, their family or their faith. In their analyses on the nature and limits of family loyalty in "The Lottery" gone is the optimistic certainty that family loyalty conquers all as in "Joseph and His Brothers." What is present is more heartening: an admission that one loyalty often conflicts with another, that our loyalties, therefore, need continual reevaluation.

If Jackson's story suggests to students that there are conditions which cause family loyalty to be questioned, Faulkner's "Barn Burning" presents the bleak truth that there are conditions which cause family loyalty to be rejected. These conditions are clearly demonstrated to students as they complete their narrative summaries of Faulkner's challenging narrative. Young Sarty is brutalized by a paranoid father and made an accessory to the father's acts of arson. As he comes to realize his place in the world as moral human being, Sarty must choose either to remain with his father and family or to abandon their life based as it is on continual dislocation, fear, and paternal tyranny. As Sarty is initiated into a moral adulthood, he abondons his family. Students see the young protagonist as making the correct moral choice--clearly there is a limit on family loyalty in cases like Sarty's. In place of an

analysis based on the question "What is the nature and what are the limits of family loyalty in 'Barn Burning,'" I asked students to do some written role-playing in its place. In an effort to discuss the concept of audience awareness with the class, I asked them to pretend that they were Sarty--to use his language, his image patterns, his "voice"--and to write a letter to Abner explaining to the father the reasons for the son's flight from father and family. Students found this assignment to be a welcome change from the previously assigned analyses. They found, too, that they could tap into their emotional response to the abusive Abner Snobes in their first-person justifications of why Sarty should completely reject the notion of family loyalty.

After we explored three very different narratives which develop the value of family loyalty in very different ways, the class wrote a synthesis essay on the question of whether there are limits on family loyalty using these three narratives, their narrative summaries, analyses, as well as pertinent incidents from personal experience as material from which they could draw. By the time students composed this culminating essay for the unit, they had acquired a substantial body of material from which to work and had reflected, perhaps, on the importance of or limits of family loyalty in their own lives. While the use of personal experience detail in this essay is not required, I found that by the point in the semester when we write this synthesis students often wished to use the assignment to draw connections with a world outside of the texts--their own.

The synthesis essay marked the end of the unit on value of family loyalty. The second unit proceeded generally in a manner similar to that described above. The focus of the unit was racial loyalty and its limits. The texts were Rodgers and Hammerstein's song "You've Got to Be Taught," King's address "Love, Law, and Civil Disobedience," Lee's novel TO KILL A MOCKINGBIRD, and Wiesel's autobiographical novel NIGHT.

I again requested that students compose summaries of the works which they read before they wrote formal analyses of what the four works have to say about the value of racial loyalty. There was a slight variation in the summaries, however. In the previous unit all the sumaries were narrative summaries. In our discussion of the Rodgers and Hammerstein song and the King address, the students wrote conceptual summaries--a slight variation on a form with which they were by now very familiar. This was, of course, demanded by the content of the two pieces, and it allowed us to discuss generic differences of the two forms. Student summaries of "You've Got to Be Taught" were one of the highlights of the class. The message of bigotry and racial hatred is so obvious and ludicrously presented that even the most

unsubtle students could not keep themselves from commenting on the negative view of racial loyalty presented in the lyric. The problem with this summary assignment was that students could hardly keep from presenting their opinions in their summaries, content which they were to reserve for the later analysis, which occaisioned a good deal of summary revision.

The activities of reading, discussing, and writing followed the pattern set in the unit on family loyalty. The reading assignments became progressively longer, and more time was devoted to class discussion, particularly of the novels. After four conceptual or narrative summaries and four analyses, the students wrote a synthesis essay drawing from all four works and from their personal experience and opinion to assess their own perspective on the value and limits of racial loyalty.

The final unit, the value and limits of loyalty to one's religion, drew from earlier course reading and included only one new text, Sophocles' ANTIGONE. I asked that students review their summaries and analyses of Jackson's "The Lottery," King's "Love, Law, and Civil Disobedience," and Wiesel's NIGHT and asked them to come to grips with what these works said about religious loyalty before we approached Sophocles' drama.

After discussion of ANTIGONE, they composed their final narrative summary on the tragedy. Their examination of the play focused on the relationship between commitment to one's religious beliefs and one's commitment to the state--a problem developed to some extent in the works by Jackson, King, and Wiesel. After the single-work analysis was completed, the students completed their final synthesis essay on the value and limits of loyalty to one's religion.

The final writing activity of the course, although rather whimsical, provided an appropriate sense of closure. I asked students to refer back to their summaries of the first narrative we explored which developed the value of loyalty, Aesop's fable "The Birds, The Beasts, and the Bat." Their final writing assignment was to compose a brief fable on some aspect of the value of loyalty. Like the writing sample and like the narrative summaries, this assignment was required, but it did not receive a grade. The fables were due at our final examination period and were read aloud.

The benefits of a value-focused writing course with a highly sequential structure such as this one are obvious. Students are encouraged to reflect upon their values, one of the aims of a liberal arts education. They learn in a manner which provides them with challenge after they have the support of an acquired skill, as in the use the narrative summary writing. There is a

strong "content base" for the course which, though focused, includes works of great variety. Finally, it causes students to realize that they are part of a cultural dialogue--that their values have a genuine validity and that education is more than vocational preparation.

An Attempt to Foster Critical Thinking: Reflections and Reactions

by
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Heidelberg College
Tiffin, OH 44883

As a teacher educator for more than a decade, I have become more and more aware that the act of teaching is a complex process involving repeated attempts at extemporaneous, often instantaneous problem solving. Teachers often make a series of decisions about how to act or what to say many of which may be simultaneous, with little or no "lead time." I have repeatedly asked myself how can I best help my students handle important classroom decisions.

Lists of skills, abilities and personal qualities that should be in the possession of effective teacher abound. In fact, during the last decade, the data base in teacher education has expanded astoundingly, leaving a solid research foundation on which to formulate the teacher education curriculum. Assuming that teacher education programs do indeed reflect the research, why then do beginning teachers have so much difficulty making the correct, or most correct, responses during the act of teaching?

It is this very question that prompted me to become one of the participants in the Fund for Post-Secondary Education Critical Thinking Grant. It would seem that teachers who possess good critical thinking skills will act more effectively in dealing with the daily problem situations that arise in their classrooms.

Human Growth and Development was the course which I chose as the vehicle for increasing my students' critical thinking skills. A requirement for both secondary and elementary education majors, and generally taken during the freshman or sophomore year, this course has been taught primarily as a lecture-discussion course with emphasis on acquiring knowledge about learning theories and developmental theories that students will then use during the junior field experience.

My goals in changing the course to increase students' critical thinking skills were three-fold. The primary change was to encourage critical analysis of the theories and issues and discourage the acceptance of the printed page and/or the words of the professor as "absolute truth." The second goal was to promote immediate application of the content through direct concrete experiences. It should be noted that the majority of the students enrolling in Human Growth and Development are still in the concrete operational stage. Joanne Kurfiss (1972) has stated that only about one-fourth of freshman entering college are formal thinkers. The third goal was to increase the personal atmosphere of the classroom.

What strategies did I use to meet these goals?

To accomplish the first goal I began the very first day by reading the following John Stuart Mill quote from page one of the syllabus.

> ". . . since the general or prevailing opinion on any object is rarely or never the whole truth it is only by the collision of adverse opinions that the remainder of the truth has any chance of being supplied." (John Stuart Mill, On Liberty, 1859.)

Then the students were informed that the class would be conducted on an informal, personal basis, that their opinions and ideas were valued and that they would be encouraged to express and defend their position through critical analysis.

Only 20-30 minutes of one cass period each week were used for teacher input or lecture (the class meets for two 75 minute periods each week). It was emphasized that disagreement with me and class peers about theories and issues was not only acceptable but expected.

In the lecture portion of the class I stressed that the theorists we were studying disagreed and there is often no one "right" theory or principle to use in a given situation in the classroom. Students in small groups were often asked to choose a theoretical position after comparing several (never more than 3) and then defend that position to the total class.

Because my experiences with freshman and sophomore student sin the past have shown them to most generally be in the concrete operational stage or in transition, my aim was to provide some form of concrete experience for the majority of the major concepts to be learned. Examples of these experiences follow:

1. Role playing the major theorists and presenting a debate to the class.
2. Experimenting with young children to see if they can conserve substance.
3. Role playing a handicapping condition.
4. Doing 2 case studies of sixth graders to compare their physical, social, emotional and cognitive characteristics.
5. Spending a week as a camp counselor with sixth graders and writing a reaction paper pointing out the developmental stage, age-level characteristics and learning theory application(s) that they observed.
6. Developing a "map" of the interrelationship among the concepts of information processing.
7. Demonstrating motivational techniques by changing atmosphere (different location, mood music) rewards, using colored transparencies, etc.
8. During a lecture in a college class, deciding what the professor's instructional objectives are and writing them in correct form.
9. Writing a test to demonstrate the relative merit of various kinds of test items.
10. Critiquing a variety of standardized tests.

Although several of these activities had been used in prior years, the emphasis this time was clearly on expansion of the concept of concrete experiential learning.

To increase the personal atmosphere of the classroom I attempted to involve each class member (18) in the discussion and/or classroom activities every class period. To accomplish this I learned about the interests, needs, activities, place of employment, and class schedules of the students through an information card which they completed on the first day of class. By asking questions regarding the students' out-of-class time, I was able to become

knowledgeable and show interest in their lives outside of the 300 minutes a week that they spent in my class. For example, I might ask Suzette how the softball team did last Thursday, or compliment Lloyd on the choir's performance Sunday afternoon It seemed that they relaxed and became anxious to share information about their interests and activities with me and their classmates. By the end of the semester a most positive informal classroom climate had emerged.

How successful was my attempt to increase their critical thinking skills? Although I have no pre- and post-testing data, from my subjective observation it would appear that this group of students made some movement from a staunch dualistic position characterized by wanting me to give them the "right" position or the "facts" of the matter to a transitional position, perhaps between Perry's (1970) second and third positions. Their reactions indicated that they were aware that at least in the areas we had been studying, there were no absolutes and they quite begrudgingly acknowledged the need to defend their own opinions. The class developed the ability to tolerate dissension and disagreement as the semester progressed. In small groups they became less inclined to react hostilely or negatively and more apt to expect that positions be defended and explained.

In final evaluation of this experience I am generally encouraged that a deliberate attempt to develop critical thinking skills and, more generally, move college students to a higher level of cognitive development can be accomplished. However, in the future there are several areas which I need to address to improve my efforts.

There is definitely a need to alter my testing/evaluation procedures to better reflect the goals of the course. More emphasis must be placed on rewarding students for analyzing issues and defending their ideas. If interpersonal skills are stressed such as cooperative learning in small groups, then again this must be evaluated.

Another area of concern is the fact that in an effort to bring all students into the discussion, a small percentage did not become comfortable with the expectation that they would participate each class period.

On occasion there was not adequate structure to satisfy the safety and security needs of some of the students. There will be a need in the future to keep more closely to time and content constraints during open discussions.

In summary, the entire grant experience was an exciting opportunity to learn more about the nature of college students' cognitive development, evaluate my own teaching techniques, try new strategies and interact with colleagues from my own and other institutions. It has been one of the most productive workshop experiences in which I have participated in the last few years.

Kurfiss, J. Sequentiality and Structure in a Cognitive Model of College Student Development. Developmental Psychology, 1977, 13 (6), 565-571.

Perry, William G., Jr. Forms of Intellectual and Ethical Development in the College Years. New York: Holt, Rinehard & Winston, 1970.

APPENDIX I

Plans for Institutionalization at Individual Colleges

Marietta College

Model for Critical Thinking Across the Curriculum

Instructors of critical thinking courses who have felt happy with changes they made and the progress of students are continuing to revise courses. To date five instructors from the first team have revised other courses in light of critical thinking techniques.

Particularly successful this year has been the revision of the syllabus and method of delivery of College 101, a multi-section Freshman year course. The successful revision of that course has spurred interest in promoting the revision of all Freshman year courses, both disciplinary and interdisciplinary. Such revision will involve traditional courses offered for Freshman as well as those courses offered under the umbrella of special Freshman year programs such as College 101, Liberal Studies 101, Leadership 101 and 102 under sponsorship of the McDonough Center for Leadership and Business and the Freshman Honors Courses. Faculty who may be teaching these courses will be encouraged to participate in critical thinking workshops to be sponsored by the Freshman Year Program as an aid to faculty development.

In addition, the newly established McDonough Center for Leadership and Business has begun sponsoring the development of new courses in all areas which will be designated as leadership courses such as Unheralded Leaders in History, Leadership and the Presidency, The Political Novel, Women As Leaders, Industrial Leadership Dialogues, etc. Faculty wishing to develop and teach such courses will also be encouraged to develop them according to critical thinking guidelines and will be offered stipends for participating in critical thinking workshops.

It is hoped, too, that funding from a proposed Lily grant for faculty development will help spur further faculty participation in future critical thinking programs.

Plans to Promote Critical Thinking Across the Curriculum at Muskingum

I. Long-term Plan

As we engage in long-range planning for the College entering the 1990's and beyond, we intend to redefine the place of critical thinking in our total curriculum. In particular, our current effort to revamp the core curriculum, Liberal Arts Essentials, presents an excellent opportunity to undertake this task. Enhancement of critical thinking will be an important element in our deliberations of goals, contents, timing of introduction, staffing, and other issues facing the LAE program.

We are also attempting to find alternatives -- not necessarily an Honors Program -- to our current curriculum that will challenge our brighter, more creative and highly motivated students. We are reviewing course offerings and programs designed to enrich the freshmen experience. We are examining new avenues such as the establishment of academic exchange programs in broadening perspectives of our faculty and students. As we review and redirect these and other programs, we will again have the opportunities to determine how the promotion of critical thinking will fit into the overall plan.

II. Interim Plan

Before the current review of the long-range plan for Muskingum is completed, we plan to do the following to augment our efforts in fostering critical thinking the across-curriculum:

1. As part of the new faculty orientation program, present the experience of faculty members who participated in the critical thinking project.

2. Support cost-sharing arrangements with all or selected ECC colleges in offering workshops on critical thinking for interested faculty members.

3. Offer forums for faculty members to share with their colleagues insights and problems about teaching.

4. Continue to fund participation in selected workshops and conferences sponsored by non-ECC institutions.

5. Continue to stress capstone and interdisciplinary courses in curriculum deliberations.

6. Continue to seek grants that support research as well as teaching.

7. Provide funds to create computer files to record results of critical thinking tests (Perry Essay and Watson-Glaser Critical Thinking Appraisal) and personality and learning profiles (Myers-

Briggs Type Indicator) given to all freshmen since summer 1986. Such files will greatly facilitate easier access for teaching, advising, and research purposes.

INSTITUTIONALIZATION STATEMENT

Larry--

As I recall, you already have a list of ways Otterbein was institutionalizing the Thinking Across the Curriculum Project. What follows is a list of how Otterbein continues to institutionalize the project and how it will do so in the future.

Presently

-- Five new team members (Team 3) are currently revising courses that they will implement in the winter

-- Discussions with the new Academic Dean continue to take place about extending the project for two more years at Otterbein, with plans for four new team members a year; when surveyed last spring, several faculty members expressed interest in the teams for 1989 and 1990

-- Tentative plans are underway to conduct two interterm activities: one for the benefit of Team 3, using past ECC team members as resources; one for the benefit of the whole faculty to follow up on the successful Faculty Conference in the fall (Faith Gabelnick held two workshops on Sept. 7-8: Thinking Critically About Teaching and Designing Assignments for Diverse Learners. All faculty members received the Kolb Learning Style Inventory and William Perry's "Cognitive and Ethical Growth: The Making of Meaning" before the session, whose overall title was Creating a Competent Learning Environment.)

-- Past team members continue to tinker with courses, discuss ideas from the project with colleagues, and thus, slowly spread the word. I sense continued interest in the project at Otterbein, and what is especially noteworthy, interest from areas such as student personnel and the library.

people call w/ questions (on campus)

In the future

-- Three past team members (John Hinton, Larry Cox, and myself) are members of the Faculty Development Committee; that committee is clearly and strongly supportive of the project and will work to include ideas from the project within its own goals and projects

-- The Faculty Development Committee is currently drafting a grant proposal to the Lilly Foundation; at least three concepts from the project are being folded in to that grant proposal: the idea of faculty working together, talking about mutual concerns, and teaching each other (groups of 5, peer mentoring); a focus on teaching, including the study of learning styles and the development of innovative methods and assignments (one content strand open to groups will be teaching); a focus on classroom research, including observation of and by peers (one content strand open to groups will be research).

-- Also part of the Lilly Foundation grant proposal is the expectation that faculty members will continue to share any expertise they gain from the experience with workshops arranged for other faculty members.

-- The project's ideas were incorporated in the planning of Freshman Studies I (Growing Up in America, a new Integrative Studies course); this course is being offered in nine sections this fall. Revision of Integrative Studies 270 (sophomore level composition and literature

course) is currently underway and three experimental sections will be offered this coming winter--I am working with two other faculty members to prepare assignments, syllabi, etc. and will be teaching one of the sections. (NEH Challenge Grant funds were allocated to revise the course, and I was named consultant to the revision.) A proposal to the Ohio Board of Regents for the creation of Freshman Studies II (history, social sciences) is currently being prepared by the I.S. Advisory Committee, chaired by Alison Prindle. If plans for that course go forward, project ideas will again be incorporated in the course. Alison Prindle, chairperson of the Integrative Studies Dept., is strongly committed to the project and will do all she can to see that the project spreads throughout the Integrative Studies curriculum.

-- Tentative plans to encourage more past team members to share their ideas through public forums on campus: Soup Group; Faculty Topics; Mini-workshops, etc.

IS Chemistry course; prof. through IS Professional Days + involvement in IS activities, tests students (MBTI) before classes start and uses lots of small group activities in a very large class.

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TO: Larry Grimes
FROM: Ken Porada
RE: Plans for Institutionalization of
ECC Critical Thinking Grant at Heidelberg College

1. **Campus Workshops and Presentations.** The Heidelberg College critical thinking grant participants have made every effort to familiarize our faculty with grant activities, and most particularly, with our most effective efforts at enhancing students' higher-order reasoning skills. For example, during the fall semester of 1987 the grant teams participated in three major campus activities: a workshop on teaching for faculty prior to the start of classes, a "faculty forum" specifically aimed at critical thinking issues, and a presentation/discussion sponsored jointly by several student honor societies.

We plan to continue developing periodic workshops for faculty. Since the overall goals and outcomes of the grant already have achieved high visibility on our campus, future workshops will be practical and focused toward the application of specific pedagogic techniques to diverse courses throughout the curriculum.

2. **Workshops for New Faculty.** Steadily rising enrollments, retirements, and program developments have led to a significant number of faculty hirings at Heidelberg in recent years. Faculty who are new to the college are, of course, likely to be unfamiliar with many of the ideas developed and implemented by grant participants. Each year, the Dean of the College organizes a one week orientation for new faculty. Included among the varied orientation sessions are several dealing with effective teaching techniques. Beginning with the 1988-89 academic year, a session within the orientation schedule is to be devoted to teaching strategies which more effectively enhance students' thinking abilities. In addition, a related external grant proposal to FIPSE by Robert Murray, one of Heidelberg's Critical Thinking participants, has recently been funded. The project, which is titled "The TACT-Mentor Program: A Dual Introduction Into College Teaching" includes material on cognitive development and critical thinking in its college teaching seminars.

3. **Presentations, Grants, etc.**

Presentations related to the grant

Nancy Siferd. Council for Interinstitutional Leadership, Boston, October, 1987.

Nancy Siferd & Larry Grimes. National Conference on Nontraditional and Interdisciplinary Learning, Virginia Beach, April, 1988. (Abstract Proceedings have been published.)

Nancy Siferd & Faith Gabelnick. Northeast Region Directors of Honors Colleges Workshop, University of Rhode Island, April 1988.

Nancy Siferd. National Conference on Intellectual Skills, Western Michigan University, November, 1988. (Abstract Proceedings have been published.)

Related grants, funded workshops

"Workshops in Humanistic Narrative", 2 four-week workshops for 16 faculty each, funded by NEH, at Princeton University, summer 1987.

"The TACT-Mentor Program: A Dual Introduction Into College Teaching", funded by FIPSE, Robert Murray, Professor of Biology, Heidelberg College, beginning fall 1988.

"Epistomology and the Liberal Arts", a 6 week workshop to be held at Western Michigan University, funding pending.

A PROPOSAL:

HOW TO INSTITUTIONALIZE THE FIPSE PROJECT
ON "CRITICAL THINKING" AT BETHANY COLLEGE

SKETCH OF THE PROPOSAL & INFORMATION ATTACHED

I. The Proposal
   A. What is being proposed & specific goals
   B. Why a wider involvement at Bethany is being proposed
      1. To fulfill our commitment
      2. To assure more benefits for Bethany students
   C. Why this particular focus
      1. Bethany's Perspective Program, Quotations & Comments
      2. An area that involves all students

II. Opportunities for Faculty & Staff - Training, Assistance
   A. Team III - some $ incentive from Bethany College
   B. Possible intensive week workshop - expenses only
   C. Assistance from members of Teams I & II (& III)

III. Information: What is this FIPSE Project
   A. Brief statements & rationale from original grant proposal
   B. Who and what involved at Bethany

I. THE PROPOSAL

A. What is being proposed?

That Bethany College "institutionalize" the FIPSE Project by integrating within the majority of the Perspective Courses most of the principles, skills and techniques of "critical thinking" or "higher order reasoning" that are at the center of emphasis of this project.

Specific goals for such integration into the curriculum are:

1. That fifty percent (50%) of the Perspective Courses qualify by the Spring of 1989.

2. That seventy-five percent (75%) of those courses qualify by the Spring of 1990.

3. Plus there is the hope that the contagion of the rethinking, reassessment and revision processes involved in reaching 50 to 75% of the Perspective Courses will result in additional "spin-off" impact that will reach further into the curriculum.

   The factor of realism in this hope is based on what seems to be a spin-off effect taking place in the curricular work of those faculty members who have studied in and worked through the project already.

B. Why is a wider involvement at Bethany being proposed?

1. To fulfill our commitment

   Agreement to participate in the FIPSE Project carried with it the commitment by each East Central College in the consortium to enact the "institutionalization" phase. Bethany has participated in the project with benefit, notably the training-learning achievements of Teams I & II and the resultant course and teaching modifications made by these members of our faculty.

2. To assure more benefits for Bethany students

   A major goal of this project is to enable our faculty members, by working together from a base of common knowledge and skills and commitment to a common goal, to assist our students to develop through stages of higher order reasoning more effectively and consistently than they would be able to do otherwise. Multiple exposure to these critical thinking skills and learning models is especially important, since progress or growth through developmental stages appears to take place at a much slower rate than most of us want to believe--and reverting to earlier stages frequently occurs.

C. Why this particular focus in Bethany's curriculum?

This focus seems to provide greater assurance that almost all of our students will have several contacts with courses that deliberately embody principles of "higher order reasoning" or "critical thinking." However, a two-step response is required to explain the basis of this claim: the first is related to Bethany's Perspective Program; the second is an extension of B2, above.

1. The Perspective Program - Quotations and Comments

a. Ref. BC Catalog description and affirmation:

"All Bethany graduates will develop eight perspectives on their world, each of which is, in appropriate ways, systematic, ethical and integrative.

"All courses within the Program address three overarching concerns of liberal learning: 1) systematic issues of critical thinking about the basic assumptions, methodologies and frames of reference of the subject field, 2) ethical issues within the disciplines studied, and 3) integrative issues designed to assist the student in gaining a personal perspective or point of view about the world as seen through the examined perspective.

"To this end, each student must complete at least four hours chosen among the courses listed in each of the perspective categories . . . plus at least eight additional hours for a total of forty hours in the program."

b. Comments:

(1) It seems that few, if any, of us have been certain that we knew what was meant by the phrase "critical thinking" that appears in the first of the "three overarching concerns of liberal learning" but which was supposed to serve as one of the criteria for admitting all courses to the listing in the eight perspective categories.

(2) Intensive work with "critical thinking"/ "higher order reasoning" in the FIPSE Project provides us with a better base for interpreting this phrase or criterion and for assuring that most of the Perspective Courses embody identifiable critical thinking skills and principles. (At least fifteen of our faculty colleagues at Bethany have a common fund of studies that may serve as such a base.)

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2. An area of the curriculum that involves all students

The Perspective Program constitutes a finite collection of courses from which each student at Bethany must complete at least ten (10) courses for a total of forty (40) hours.

This means that the Perspective Program provides one of the best sets of courses—one of the best sub-sets in our total curricular construct—upon which to concentrate the critical thinking institutionalization effort.

When seventy-five percent (75%) or more of these courses (plus the Origins courses) embody the principles of "higher order reasoning"/"critical thinking," it becomes almost assured that almost all Bethany students will have several contacts with these principles and, being spread over a longer period of time, this should assist them in progressing through developmental stages by continued reenforcement. (Complementary to this: each student must complete Origins III and several students are to complete Origins I and II; the professors conducting these courses have been involved in the FIPSE program and have included aspects of the Project in these courses already.)

II. Opportunities for Faculty and Staff - Training, Assistance

A. Question (objection):

But, wait a minute! How can those faculty members who have not yet participated in the FIPSE "Critical Thinking" Project be expected to embody the essence of that program in the Perspective Courses they will conduct?

B. Answer

Given the willingness and motivation to work together to achieve the "across-the-curriculum" status of this project, a wide range of opportunities for training in and familiarity with the principal features of this project are available.

1. Team III - some $ incentive from Bethany College

One means is the 3½-4 week program of training, study and syllabus-course revision that would constitute the work of Team III - this would be quite similar to the sessions for Teams I & II. Bethany College would provide some financial incentive for the time and effort invested by team members. The most likely time would be June or July of 1988, although there is some degree of flexibility in this schedule.

2. Possible intensive week workshop - expenses only

Although not yet precisely set, there are plans for the possibility of a week-long, quite intensive workshop in August, probably at Bethany, in which the basic principles of the project would be highlighted.

Enrollment per ECCC institution would be limited and colleges would cover expenses only, not provide additional financial incentives.

3. Assistance from members of Teams I & II (& III)

Most members of Teams I & II would be willing, within the limits of their time, to assist others in becoming familiar with the basic ideas and principles of the project and in the process of progressively integrating these into the syllabus and structure of a course.

III. Information: What is this FIPSE Project?

A. Brief statements & rationale from original grant proposal

"9. Proposal Title: Training Faculty Members at Small Liberal Arts Colleges to Teach Higher Order Reasoning Skills to Their Students"

[By the first year Report, the heading was "East Central College Consortium Cross-Curriculum Critical Thinking Project: Report . . . ."]

"10. Brief Abstract of Proposal:
Problem: The faculty and administration of the East Central College consortium are concerned with the problem of the inability of their students to think critically, to synthesize information and to integrate knowledge.
Project: The Consortium requests funding got a period of three years [only two years were granted] for a faculty development project directly affecting 15-30 percent of all faculty from each of eight institutions. A total of 120 Consortium faculty across all disciplines will be trained in understanding William Perry's model of cognitive development, become familiar with the present theories and practices for teaching higher order reasoning and, finally, incorporate this information into practical application in their classrooms. Simultaneously, a long range longitudinal study will be initiated by testing student reasoning skills. Data and results will be networked to other colleges and research persons; it is anticipated that data generated will be particularly valuable to those interested in small, private, liberal arts colleges."

. . . . . .

"I. Identification of the Problem

The recent report of the Study Group on the Condition of excellence in Higher Education suggests that American college students have considerable trouble when asked to think critically, to synthesize information, and to integrate knowledge. Studies of cognitive development among college students by William Perry and others bear this out. Nevertheless, in assignment after assignment, college professors continue to assume that students have mastered these and other higher order reasoning skills. The result

is either dibilitating anxiety, negative dissonance, and defeat on the student's part (Reed Larson) or gradual erosion of expectation on the part of the instructor (implied in the Study Group report). Since graduate schools have taught professors to teach a disciplinary content rather than higher order reasoning skills, the problem is not easily overcome and seems, most often, to be resolved either by student attrition or by a tacit agreement between student and professor to lower expectations and pretend to engage in higher order reasoning. The problem is double-edged since both students and faculty lack certain basic skills necessary to insure that higher order reasoning takes place in the undergraduate classroom.

. . . . . .

"What we had discovered [through a funded "cross-curriculum writing project"] was that not only did students have a problem with higher order reasoning, but so did faculty. Our faculty members, most often self-assured master teachers of the content of a discipline, were less certain and less effective when trying to teach students mechanisms for understanding, manipulating, and creating ideas and information within the disciplines. Therefore, the result of attempts to improve the teaching of thinking in the colleges too often resulted in the following situation: students unable to complete assignments satisfactorily and faculty unable to help students identify and acquire the skills necessary to do those assignments.

"It is our assumption that by addressing the problem of faculty skill deficiencies in the area of teaching higher order reasoning we can do much to solve both sides of the problem. We make this assumption because of the nature of our member institutions. All are small, private colleges staffed by faculty who make excellence in teaching their primary activity and concern. Therefore, this problem is one that we faculty members ourselves have chosen to address and in which we have both a personal and professional stake—it stands between us and the excellence to which we aspire . . . ."

B. Who and what involved at Bethany

Ref. the following two pages for names, and areas of the members of Teams I and II (1986-87 & 1987-88),and also for further description of the structure of the project and of the study and training activities of the Teams.

TO: Members of the Bethany Team for the Higher Order Reasoning Project
FROM: Robert E. Myers, Bethany Campus Coordinator REM.
DATE: January 1987
RE: Orientation information, phases of project, game plan

Welcome to the Bethany Team for this special FIPSE/ECCC program. You are one of fifteen members of the faculty/staff selected by the Dean of the Faculty for primary participation in the project. Our Bethany Team will be divided into two groups: one group will be formally involved in the study-training activities during 1986-87 and a second group will be formally involved in these activities during 1987-88.

The 1986-87 group ("First Year Team") includes:
W. Randolph Cooey (Economics/Business)
Katherine Coram (Social Work)
John U. Davis (Education)
Larry E. Grimes (English/Liberal Studies) (Origins III)
Hiram J. Lester (Religious Studies/Origins I)
Anthony Mitch (English)
Robert E. Myers (Philosophy)
Harold C. Shaver (Communications)
and Francesca Giordano (Counseling, Career Development/Testing)

The 1987-88 group ("Second Year Team") includes:
Lynn Adkins (Sociology/Social Work)
Jonas Barciauskas (Library/ Religious Studies)
[redacted]
John D. Davis (Economics/Business)
Edwin Goldin (Physics/Computer Science)
David J. Judy (Fine & Applied Arts/Theatre/Origins II)
T. Gale Thompson (Psychology)
Robyn Cole (English)

The full title on the proposal for the grant reads: "Training Faculty Members at Small Liberal Arts Colleges to Teach Higher Order Reasoning Skills to Their Students." Less cumbersome and equally effective for our purposes is an identifying phrase such as "Critical Thinking Project" or "Higher Order Reasoning Project." The Fund for Improvement of Postsecondary Education awarded the grant to the East Central College Consortium. (For reasons that made sense at the time of application, the grant was "headquartered" at Hiram College. Some changes have taken place since then.) Dr. Larry Grimes was appointed Director of the grant at the Consortium level; the Director's tasks include working with FIPSE and the Consortium, with consultants and campus coordinators, arranging meeting times and places, working with the evaluation team, and many other grant-related administrative matters.

Each college has a Campus Coordinator. The Campus Coordinator's tasks include working directly with the campus team and its members, with the Director and other Campus Coordinators, with the third year evaluation team, with the campus team and others to "institutionalize" the higher order reasoning skills on her/his particular college campus, and other campus and consortium oriented aspects of the project.

(continued)

The original grant proposal indicates that: "Consortium faculty across all disciplines will be trained in understanding William Perry's model of cognitive development, become familiar with the present theories and practices for teaching higher order reasoning and, finally, incorporate this information into practical application in their classrooms."

"During the first year eight [& second year, seven] members of each consortium college will 1) attend a two-day workshop designed to acquaint them with both Perry's model and with the teaching of higher order reasoning, 2) spend one month of the summer studying Perry and other cognitive theorists while reading in literature on teaching higher order reasoning, 3) confer with a consultant as they study and read, and 4) revise, on their own time, and teach a course designed to emphasize the teaching of higher order reasoning along with course content."

After reading the first set of materials, attending a two day workshop and studying the appropriate literature in the summer, each member of the team will focus on the application phase by selecting one course he or she plans to teach the first semester (that's of the academic year 1986-87 for the "First Year Team;" 1987-88 for the "Second Year Team"), teach the revised course, and then, during the second semester, assess the resulting in-class experience and be prepared to "share" insights and aspects of that experience with others.

By the spring of 1988 our Team of fifteen (or so) should be able to make a significant impact on and contribution to the Bethany College community. The word in the proposal for this phase is "institutionalize": the Campus Coordinator and the full Team will work toward revising additional courses and work with other members of the faculty and staff to increase the level of conscious incolvement and organized effort to teach "higher order reasoning skills" to more of our students. We can do much to assist in this permeating activity.

We are a team, a group of people joining together in a cooperative effort to learn and to apply effectively the principles of higher order reasoning in our classes for the benefit of Bethany's students. Individually we should benefit, too, for each of us wants to become a more effective teacher. However, we are not competing with one another—we are working together for a common goal. Welcome to the Bethany Team for the Higher Order Reasoning Project.

REM
Bethany Campus Coordinator

APPENDIX J

Sample Dissemination Articles

Abstract:
Faculty Development at East Central Colleges
in Ways of Knowing

The astonishing best-seller success of Allen Bloom's The Closing of the American Mind reflects vague public uneasiness about the foundations of knowledge.

In East Central Colleges, a consortium of eight liberal arts colleges in three states--Bethany College (WV), Heidelberg (OH), Hiram (OH), Marietta (OH), Mount Union (OH),Muskingum (OH), Otterbein (OH), and Westminster (PA)--two major funded projects have enabled 150 faculty to explore intensively current theories of knowledge in cognitive psychology and in narrative. The projects have resulted in sophisticated awareness of critical thinking throughout the curriculum and of narrative as used in history and literature. The awareness has been implemented in the classroom.

The consortium's project in critical thinking chose as its base William G. Perry's "Essay on Cognitive and Intellectual Growth." The essay describes nine stages through which an individual must pass to reach mature ethical development. Other psychologists describe variant patterns of growth or learning styles; Kolb, Kohlberg, Myers-Briggs were also studied. ECC faculty now understand where these descriptions overlap and also how Carol Gilligan, Mary Belenkey, Lee Knefelcamp offer alternate descriptions of ways of knowing. Comparative summary of such theories will be offered.

Larger issues are at stake than which cognitive psychologist's theory to adopt. Is critical thinking a universal process across the disciplines, or does each broad set of disciplines develop its own theoretical base and primary methodology? The question is epistemological; ECC's response was pluralistic. No college established a generic critical thinking course as a result of the funded project. Over 120 faculty at eight campuses spent a month reading intensively and then revising a course so as to make explicit the teaching of critical thinking. At seven weekend conferences these faculty conducted workshops for each other and shared their syllabi. Examples of successful implementation strategies will be presented.

The critical thinking project was funded for $246,000 by FIPSE for three years (1985-88). It was supplemented by $120,000 from NEH to take thirty-two ECC humanists to Princeton in the summer of 1987 to study current theories of narrative. Again, the focus was ultimately epistemology. Participants considered problematic definitions of truth in relation to history and fiction. They investigated the linguistic basis for structuralist approaches to history and literature. Understanding words as signs and texts as codes, they saw how the foundations of knowledge in history and literature have shifted. No longer do certain current scholars assume that a historical or literary narrative presents knowledge which corresponds to a universal reality. Rather, truth may be approached only through relationships, coherence, consensus-- or through anarchic responses from individual readers. Or communities may construct their own modes of narrative--ECC looked at Zora Neale Hurston as cultural anthropologist choosing to report her findings in anthology of tales presented within an overarching novelistic frame. Is Mules and Men science or art, truth or fiction? And how might such questions of narrative be raised in the undergraduate classroom? Examples here also will be presented.

The next project which ECC will pursue confronts epistemology directly. In the first year on each campus a series of faculty seminars on representative theories about the foundations of knowledge (Plato, Kant, Hegel, Nietzsche, Heidegger, Wittgenstein) will be staged. In the second year twenty-two faculty will focus for six weeks on six living American philosophers in relation to epistemology. In the third year curricular implementation and disseminations will follow. Unless faculty examine straight-on the epistemological questions, their ability to read and understand the best scholarship in their own disciplines and their ability to respond to the public outcry about education are at risk. Especially faculty in liberal arts institutions need to consider foundations of knowledge across the curriculum to assure that they prepare students for the continuing debate about epistemology.

FACULTY DEVELOPMENT IN EAST CENTRAL COLLEGES IN WAYS OF KNOWING

Larry E. Grimes and Nancy Siferd

East Central Colleges (ECC) is a consortium of eight private liberal arts colleges in three states: Bethany College (WV), Heidelberg College (OH), Hiram College (OH), Marietta College (OH), Mount Union College (OH), Muskingum College (OH), Otterbein College (OH), and Westminster College (PA). The consortium, founded in 1968, is active particularly in pursuing faculty development, facilitating cooperative ventures and informational meetings among administrators and others, grantseeking, and assessing of portfolios documenting college-level learning from life- and work-experience. Two particular faculty development projects, set against the context of previous projects, reflect pragmatic, philosophic, and highly successful cooperation in improving teaching and in clarifying ways of knowing. The projects may be examined both as effective emphases or strategies for faculty development and as important manifestations of shifting assumptions about knowledge.

Thinking Across the Curriculum. The FIPSE-funded **thinking across the curriculum** project which I am about to describe began when faculty members of the East Central Colleges stopped to reflect on the results of a very successful consortium venture into writing across the curriculum. After much pondering, we discovered what was both obvious and problematic: our efforts at teaching writing had succeeded to the point where we could see clearly that most flawed writing was, in fact, flawed thinking. To solve problems raised by our writing project, we decided to design a plan to facilitate thinking across the curriculum.

Several basic assumptions shaped the plan we adopted and implemented. First, we assumed that thinking, like writing, was a complex process and not merely a neat set of definable skills. Second, we assumed that students come to understand this process slowly and after repeated exposure and experience with the process, Third, we assumed that students entered into the process at different stages of cognitive development, carrying with them different understandings of what it meant to think, to learn, to know. Finally, we assumed that lively thought was

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always contextual and relational; therefore, it is best understood in particular disciplinary contexts and in specific thinking environments.

Because of our assumptions, we rejected the notion that students take a course in "critical thinking" or choose from among a list of courses a single course with a special "critical thinking component." Rather, consistent with our process model, we elected to saturate the curriculum with courses consciously designed to foster lively thinking among our students. Our hope was that students would have a variety of experiences with "thinking" in various contexts, under different conditions, and even by different names.

To that end, we applied to FIPSE in 1985-86 for funding to develop a thinking across the curriculum program on each of the eight East Central College campuses.

FIPSE support allowed us to:

--hire consultants
--hold workshops on course revision and the teaching of thinking
--support 120 faculty as they worked in interdisciplinary groups to redesign "regular" courses so as to emphasize the teaching of thinking in those courses
--develop and teach 120 courses, within the various college curricula, which foster higher order reasoning
--undertake a longitudinal study of the effectiveness of a cross-curriculum approach to the teaching of thinking

More interesting than what we have done (design a program for teaching thinking across the curriculum), I think, is how we have done it. We have done it by paying careful attention to three things:

--how students think and learn
--how we as faculty think, learn, and teach
--how people within our area of study learn, think, and know.

To fix this firmly in mind, I have designed what I call "a mantra for the teaching of critical thinking." It goes as follows (and should be chanted with a full breath drawn deep-down, diaphragm deep--repeat five times, each time emphasizing a different aspect of the process for teaching thinking):

I TEACH STUDENTS TO THINK ABOUT AND THROUGH (SUBJECT/COURSE)
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An explication of this mantra will do much to explain the "how" of our project. To begin with the obvious, it is **"I"** who teach my students. And "I" have been trained to think in the discourse of a particular discipline: "I" have definite learning style preferences: "I" approach the task of thinking and knowing with a lifestyle shaped by years of experience and experiment. "I" do not come neutral or neutered into the classroom. "I" am

a presence and a power in the classroom capable of facilitating or frustrating the thought processes of my students. My awareness of how "I" prefer to think and know, and my ability to articlate how "I" prefer to think and know, will greatly influence whether or not thinking is facilitated or frustrated in my class. To help faculty come to terms with the "I" who teaches, we have used both David A. Kolb's Learning Style Inventory and the Myers-Briggs Type Inventory. From this experience, faculty have come to see how deeply the preferences of this "I" influence teaching style, assignments, and classroom activities (or inactivities, as the case may be).

I **TEACH.** At all of the ECC colleges, that is the center of faculty life. And if the center does not hold .... But hold it can, so long as I take pedagogy as seriously as I take the subject matter that I teach. In our proposal to FIPSE we admitted that our graduate education did not adequately prepare most of us to be teachers. So our project has provided faculty with an opportunity to learn more about teaching techniques and to discuss and share teaching strategies with colleagues from various disciplines. Again we have discovered the obvious: faculty become energized and empowered when and as they find an audience enthusiastic about the nuts and bolts of teaching.

STUDENTS. I teach students. How often I hear colleagues say, "I teach English" or "I teach Physics." Sad sentences those. Empty perhaps? Selfish even? But common. Very common. Yet I do not know very many faculty members who really want to think and know in a room empty of students, however frustrating teaching can be when the learners are present as dense and solid mass. For most of the ECC faculty, graduate school was not a place where "the student" was a topic for discussion. Ideas were at the center of that world. But in any good class, the student must be the center around which thinking, knowing, and learning turn. So, we have tried hard in our project to know more about how students think and learn. To that end, we have explored the work of Jean Piaget, David Kolb, William Perry, Carol Gilligan, and others; and we have used information gathered on such instruments as Kolb's Learning Style Inventory, the Myers-Briggs Type Inventory, and Widick and Knefelkamp's Measure of Intellectual Development. While many models have helped us to better understand our students, the project was focused on the work of William Perry in particular.

The mantra sentence is a very complex one. It deliberately stretches out the sentence so commonly uttered by academics when asked what they do. And because it does so, the last half of the mantra makes clear three very important things about the teaching of thinking. First, thinking occurs in a very complex context: a teacher/learner context, a teaching/learning context, and a thinking/discourse context that is discipline-specific (sometimes even course-specific). **TO THINK IS TO THINK IN CONTEXT.** Different skill sets, different frames of reference, different methodologies, different domains of discourse take center stage as thinking is played out in first one arena of thought and then another.

Indeed, as one moves to the last phrase in the mantra it is possible to consider **THINKING AS CONTEXT.** When I try to lead students into the intricate process of thinking about a poem, I

am forced to admit with Marshall McLuhan that the medium is the message. Good thinking in biology will not do over here in a lit class. Neither will good thinking from sociology. The context has changed and my students and I must come to grips with thinking in and as this new context. This is where constant and vigorous study within our disciplines pays off for us as teachers. We are the experts we need when it comes time to articulate for our students the nature of thinking in and as the context and contour of our field. Sometimes, however, we discovered in our project, we neglect to build into our courses both the time and the strategies needed to insure that students learn to "think about and through" our discipline. Rather, we short-circuit matters and just teach "chemistry" or "mathematics." The result is frustration as too few students come to know and appreciate the theory of the discipline that so excites us. Too many students memorize and forget the "materials" we teach. Here our project suggests that, at least in soem key courses in every department, the exploration of the process of thinking in the field must be central to the course. And if we expect very high order thinking in our field, one "methods" course won't do it. Thinking across the curriculum is not only an agenda for the curriculum as a whole, it would appear to be an important item on departmental agendas as well.

I'd like to share some results from our nearly three years of experiment. First, journal abstracts submitted by faculty bear constant testimony to their renewal as teachers and to the empowerment they have been given now that they do more than "teach a subject." Many say that it is by far the best faculty renewal experience they have had to date. Second, the emphasis on who teachers and learners are, and on how they teach and learn has significantly altered the environment in which we teach. When teaching becomes contextual and relational, rather than content-bound, affection touches the learning and thinking process. The result is love: love for each other, love for learning, a love of thinking, and love of the subject matter itself.

Finally, our grasp has exceeded our reach. The goal of the project was to have 120 faculty generate 120 courses carefully redesigned to foster lively thinking. We have not done that. Instead, we have redesigned 200 or 300 courses. Almost all faculty report serious revision of nearly every course they teach. Further, they report serious revision of nearly every course they teach. They report acts of tree-stump evangelism, even in alien fields. Converts have been made. So courses fostering lively thinking are now deeply embedded in the curricula of the East Central Colleges. With them have come significant faculty renewal. From renewal have come new modes of teaching, both affective and effective. And we regularly observe thinking of a livelier sort than we saw before we began our venture.

History of ECC faculty Development and Ways of Knowing. As preceding description has suggested, the thinking across the curriculum project led faculty in East Central Colleges to an epistemological question. We had verged on the question before, though without realizing it in 1973 when through participation in an early FIPSE project on "guided design," faculty discussed the wisdom in giving students room to discover knowledge. The

professor was to provide a mapping structure, then move out of the way so that students in groups or as individuals might find their own way to knowledge. We did not question that knowledge was out there, like a pot at the end of the rainbow, and the finder would recognize and appreciate the value of the lode if allowed the thrill of prospecting.

In the mid-70s a Mellon grant helped faculty learn how to advise nontraditional students. When Art Chickering described patterns of development in adult learners for us, we began to think in new ways about students as real people, maybe even about ourselves as real people going through similar patterns of adult growth. Follow-up sessions at the Gestalt Institute in Cleveland invited us to consider the role of perception in the educational exchange, the role of shifting background and foreground. If we had stopped to think about the epistemological implications of the project, we might have realized a blur in the definition of knowledge as a fixed treasure somewhere out there at the end of our course. We were no longer regarding the student as an empty vehicle to be fueled by the transfer of content, nor were we mapping the route for some novice traveller toward a predetermined end. We were journeying with our students as fellow travellers in a mutually negotiated process of communication. Student and teacher were both receivers and senders of filtered and filtering messages that would co-direct the conversation, moving us into experiences that would constitute knowing.

We didn't say all these things to ourselves then. It was later that we became able to describe these new ways of knowing.

Similarly, in the writing across the curriculum project, funded by the Gund Foundation in the late 70s, we verged on epistemological issues but didn't fully articulate them. We knew that if we wanted students truly to know how to write, they needed reinforcement of their skills beyond an introductory writing course. Varied member institutions chose varying means of accomplishing this end: designating courses with a significant writing component, requiring so many such courses for graduation, and so on. In training workshops for faculty in the teaching and grading of writing, we saw some of our colleagues' writing assignments and their sometimes quirky judgments in grading. It was clear that some faculty were better able and willing to make explicit what they considered good writing to be; some could also model that behavior better than others; and some of us knew the eternal and true standards for good writing and others did not. We wished our colleagues the good sense to listen to those of us who knew where these eternal verities were to be found.

We did acknowledge the importance of writing as process--the stages of brainstorming, freewriting, defining focus, gathering data, drafting, revising, getting feedback, and revising. We did not fully explore the possible inseparability of language from knowledge, the community of learners in different classrooms who establish, share, and pass on conventions of language. We did not say that knowledge in one field might be sufficiently distinctive so that one might need to abandon the notion of a gloriously integrated body of knowledge at the end of four years' journey through a curriculum loaded with writing

assignments, general studies, majors, and electives. In valuing process and varied contexts, we were nonetheless giving up the definition of knowledge as cohesive object out there; we were conceiving of it as the construct of a community.

Surely, if we were going to give up knowledge as content--knowledge as a product--we should teach the essence of process in context then. That would be--well, maybe problemsolving. But cognitive psychology was calling it "critical thinking." We struggled more directly with epistemological notions now. Instead of ideas, facts, and content, we focused on the context of the classroom and the people in there. When we pressed harder for definition of the essential steps of critical thinking, ECC decided--not without difficulty-- that knowledge had to be further defined only within varied disciplines.

ECC's response to the ultimate epistemological question built into the critical thinking project was pluralistic: no generic and universal process of critical thinking underlies all disciplines. The responsibility for defining critical thinking resides in individual disciplines, or within broad sets of disciplines. For a graying faculty twenty years out of graduate shcool and teaching in small private liberal arts colleges, the problems in identifying such ways of knowing were multiple.

Our teaching loads are heavy. We may teach four different preparations each semester, with independent studies, honors projects, supervision of off-campus internships, Weekend College, advising, committee work, and occasional travel to conferences on top. To publish or to present papers requires heroic effort beyond normal classroom preparation. One is doing well to read current scholarship now and then. Add to these burdens the necessity (and the temptation) to teach as generalists. We venture to "profess" in courses sometimes afield from our graduate school training, as a means of escaping teaching the introductory western civ or the freshman comp course for the fifteenth semester in a row. Scurrying to educate ourselves ahead of the class in the new field, we may or may not come upon the best scholarship to help us prepare lectures, discussions and activities.

Such circumstances lead us to search out course-related scholarship that is readily comprehensible--in terms of our prior training and in terms of tomorrow's or next week's classroom application. They do not incline us toward unfamiliar systems of thought and alien language. Since such ingredients characterize some of the best humanistic thinkers of the 70s and 80s, we may not read them, but rather suspect them of seeking to undermine, even destroy, the fields we love.

Historians probably didn't become historians because they wished to do statistics. Literature and writing profs didn't enter their field intending to do hermeneutics or deconstruction. Some of us hadn't even gotten around to reading Northrop Frye, and we began to glimpse the word "post-structuralism" on an occasional title. Glancing at an article or book on deconstruction, we confirmed nasty rumors about the unreadability and the nihilism of this school of humanistic thinking. We excused ourselves and went on being traditional New Critics (a school several generations old, not "new") and

classic storytelling historians.

Humanistic Narrative. The purpose in taking 32 ECC humanists to Princeton for "Dual Workshops in Humanistic Narrative" for four weeks, sponsored by NEH, was to gather some coherent sense of the furor in current scholarship. In the moments when we dropped defensive posturing, we admitted that our own self-respect required basic grounding in new ways of knowing about narrative in history and literature. We hoped to apply appropriate insights and methods in one course per participant.

In the first week the focus was on philosophic orientation to the debate about narrative. A classic text by Herodotus provided a lens for our study, with Robert Scholes from Brown University and Rufus Fears from Boston University leading the literature and history institutes. Fictional technique makes the difference between a chronicle and a history, we learned. Nobody much values the chronicle's mere facts: "a" happened, "b" happened, "c" happened, "d" happened. Instead, a historian groups such events, embellishes them with description and character and interpretation--with meaning. The reader helps create these meanings, too, because words carry associations from other contexts, and the writer uses those associations, often consciously. Reading and writing history are mutually creative processes.

In the second week, with Jerrold Seigel of Princeton University and Wallace Martin of the University of Toledo, we glimpsed the parallel structuralist assumptions of Ferdinand de Saussure's work in linguistics and Claude Levi-Strauss's anthropology. Later that week we read Michel Foucault, Hayden White, Teodor Todorov, and Roland Barthes. This extrememly challenging and unsettling week was the crux of the institute. As words became signs and texts became codes, we began to wonder what we knew through literature or history and how we knew we knew it.

During the third week psychoanalytic narrative and its relation to history and literature were presented by Claire Kahane of SUNY's Center for the Psychological Study of the Arts at Buffalo and Peter Loewenberg of UCLA, with special attention to Freud's Dora. We explored a multitude of storymaking psyches--Freud, Dora, the Victorian culture, contemporary psychoanalysts, and ourselves. We considered new foci for stories of the psyche--the mother rather than the father, the shaping influence of experiences beyond those within the family, the psychological makeup of historic individuals, language as the center of identity. We considered the historian's or the literary critic's obligation to confess the nature of his or her own psyche as coloring the interpretation either might write.

In the fourth week we considered Afro-American oral tales, recognizing the complex six-part structure that patterns most natural narratives. Focussing on performative context for the tales in Zora Neale Hurston's Mules and Men, we discovered once again blurred boundaries between science and art, history and fiction, anthropological document and novel. Patrick Mullen of Ohio State University and Trudier Harris of the University of North Carolina closed the dual workshops.

Assorted applications to the undergraduate classroom followed.

Because the workshops in narrative examined writers' uses of time--where does it slow down? speed up? and what is thereby emphasized or omitted? how does the reader fill in the missing content?--the seminars began to talk about "ghost chapters" (the phrase was Robert Scholes'). Several participants went back to campus asking their students to write missing background incidents or outcomes for a given short story. Imaginative responses gave students permission to enter the works, to make them theirs. Discussion of the ghost chapters gave students and professors new ways to compare their sense of characters, their preferred types of storyline. Several participants in the workshops had their students write journal entries while reading before class or had them "talk aloud" in diads during class discussion.

Professors recognized, more than ever before, that to comprehend the story being told by author or filmmaker, a reader/viewer must anticipate incidents about to unfold. A reader predicts, then tests and adjusts that preconstructed storyline against the one the writer writes. The writer has perhaps experienced some like process--forecasting in the mind, then drafting and revising. Whether writer and reader ever exactly meet in the text is probably unknowable--a given text is multiple, taking on different meanings for different readers or even for the same reader. The reader makes her own story from the one the writer wrote. Having students write, talk about, compare the stories they are making from "the" story helps jostle the interpretive process into some reasonable parameters.

Other professors found applications of the six-part structure of natural narrative in a Hemingway story, for example. One found a new approach to Huckleberry Finn--how would the story be different told from his point of view? What has been omitted that he would include? Another found a similar focus on what is usually omitted--the woman's point of view in Between the Acts by Virginia Wolff. Other faculty began to see how and what they might teach in Jorge Borges, John Barth, Don Quixote. One restructured the second half of a two-semester survey of American literature--subtitling it "The Crack-Up of Narrative." Historians began to recognize their own storytelling role in the classroom. They considered using classics from Herodotus or Tocqueville, the likes of which they had previously thought unteachable for today's students.

Collegiality within the consortium was enhanced because faculty exchanged inter-campus lectures. Nearly all scheduled visits to lecture in a colleague's classes or to meet in an all-college forum. To date, two-thirds of these lectures have actually happened. The pleasure of being hosted is unusual for most ECC professors--they are more accustomed to hosting. A boost in morale and real friendships have followed. The evaluative weekend workshop, scheduled for April 1988, was fondly described as a "reunion" as well as a serious working session on deconstructionist theory of narrative in history and literature.

Additional impact from the workshops was scholarly. One participant was researching a biography while at Princeton and appreciated the heightened consciousness of his combined role as novelistic dramatist and historian. Another decided to undertake a major life-review oral history project, in part,

because of consultation with Patrick Mullen. Several took sabbaticals in the year following the workshops and found the narrative study relevant. A music professor constructing an interactive text in appreciation of world music saw parallels between the structuralist approach to literature and the cross-cultural/ahistorical analysis of aspects of music she was attempting. Another intends to utilize Geertz's technique of "thick description" in research and teaching of theatre history. A poet reconsidered his usual habit of excising autobiographical references in his poems.

Even consultants indicated impact on their scholarship. Claire Kahane now teaches a graduate course on psychoanalysis and narrative. Patrick Mullen intends to write on narrative structures in Mules and Men. Wallace Martin is continuing to work with East Central Colleges in developing subsequent activities explicitly addressing ways of knowing. A series of programs, each repeated on several of the ECC campuses, in being discussed for 88-89, to be called "The Opening of the American Mind." Bloom's The Closing of the American Mind is the beginning point for each program, particularly Bloom's complaint that American educators are not teaching the life of reason, the life of the soul. The life of reason--as described by Plato, Kant, Nietzsche, and Dewey--will be examined to see how Bloom's reading of the holds up. The concern for study of philosophers emerged from the study of narrative theory when ECC faculty realized the necessity to know especially the continental tradition better.

A further aim is to bring together 20-25 cross-disciplinary faculty to study current anti-epistemological philosophers, Richard Rorty being chief among them. Like much of the American public who have bought Bloom's book and Hirsch's Cultural Literacy and who follow Bill Bennett's well publicized attacks on educators, the faculty of East Central Colleges are concerned about ways of knowing. They actively seek to make themselves well informed discussants and teachers of ways of knowing within their fields.

THINKING ACROSS THE CURRICULUM: A Project of the East Central Colleges*

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Professor of English

In 1984 FIPSE [Fund for the Improvement of Postsecondary Education] funded a **thinking across the curriculum** project proposed by faculty members of the East Central Colleges. That three year project has just come to an end and our present data suggests that our project assumptions, the implications of those assumptions, and the translation of those implications into practical applications encourages and supports self-conscious thinking in the classroom. Our basic assumptions were, first, that thinking, like writing, was a complex process and not merely a neat set of definable skills. Second, that students came to understand this process slowly and only after repeated exposure and experience with the process. Third, that students entered into the process at different stages of cognitive development and carried with them different understandings of what it meant to think, to learn, and to know. Finally, that lively, self-conscious thought was always contextual and relational; therefore, it is best understood in particular disciplinary contexts and in specific thinking environments.

Consistent with our process model, we elected to saturate the curriculum with courses consciously designed to foster self-conscious thinking among our students. In such a setting, we thought students would have a variety of experiences with "thinking" in various contexts, under different conditions, and even by different names.

To accomplish this end, the ECC colleges selected 15 faculty from each of eight campuses (representing 15-30% of the full-time faculty) and asked them to attend workshops on teaching, learning, and cognitive development **and** to spend most of one summer revising a traditional discipline-based course so that course could and would foster self-conscious thinking. FIPSE supported us generously in this effort. 120 courses in more than 20 disciplines have been revised as a result of the project.

More interesting, perhaps, than what we have done (design a program for teaching thinking across the curriculum) is **how** we have done it. We have done it by paying careful attention to three things:

--how students think and learn
--how we as faculty think, learn, and teach
--how people within our area of study learn, think, and know.

To give shape to this process, I have designed what I call "a mantra for the teaching of thinking." It goes as follows:

I TEACH STUDENTS TO THINK ABOUT AN THROUGH (SUBJECT/COURSE).

An explication of this mantra will do much to explain the "how" of our project.

To begin with the obvious, it is **"I"** who teach my students. And "I" have been trained to think in the discourse of a particular discipline; "I" have definite learning style preferences; "I" approach the task of thinking and knowing with a life style shaped by years of experience and experiment. "I" do not come neutral or neutered into the classroom. "I" am a presence and a power in the classroom capable of facilitating or frustrating the thought processes of my students. My awareness of how "I" prefer to think and know, and my ability to articulate how "I" prefer to think and know, will greatly influence whether or not thinking is facilitated or frustrated in my class. To help faculty come to terms with the "I" who teaches, we have used both David A. Kolb's Learning Style Inventory and the Myers-Briggs Type Inventory.

I **TEACH**. At all of the ECC colleges, that is the center of faculty life, nevertheless we thought that our graduate educations had not adequately prepared most of us to be teachers. Therefore, our project has provided faculty with an

opportunity to learn more about teaching techniques and to discuss and share teaching strategies with colleagues from various disciplines.

STUDENTS. Often I hear colleagues say, "I teach English" or "I teach Physics." Yet I do not know any dedicated teachers who really want to think and know in a room empty of students. Still, for most of the ECC faculty, graduate school was not a place where "the student" was a topic for discussion. Ideas were at the center of that world. But in any good class, the student must be the center around which thinking, knowing, and learning turn. So, we have tried hard in our project to know more about how students think and learn. To that end, we have explored the work of Jean Piaget, David Kolb, William Perry, Carol Gilligan, and others; and we have used information gathered on such instruments as Kolb's Learning Style Inventory, the Myers-Briggs Type Inventory, and Widick and Knefelkamp's Measure of Intellectual Development.

The mantra sentence is a very complex one. It deliberately stretches out a commonplace academic response to the question, "what do you do?" And because it does so, the last half of the mantra makes clear three very important things about the teaching of thinking. First, thinking occurs in a very complex context. A teacher/learner context. A teaching/learning context. And a thinking/discourse context that is discipline specific (sometime even course specific). **TO THINK IS TO THINK IN CONTEXT.** Different skill sets, different frames of reference, different methodologies, different domains of discourse take center stage as thinking is played out in first one arena of thought and then another. Indeed, as one moves to the last phrase in the mantra, it is possible to consider **THINKING AS CONTEXT.**

To speak personally for a moment, when I try to lead students into the intricate process of thinking about a poem, I am forced to admit with Marshall McLuhan that the medium is the message. Good thinking in biology will not do over here. Neither will good thinking is sociology. The context has changed and my students and I must come to grips with thinking in and as this new context. This is where constant and vigorous study within our disciplines pays off for us as teachers. We are the experts we need when it comes time to articulate for our students the nature of thinking in and as the context and contour of our field. Sometimes, however, as we discovered in our project, we neglect to build into our courses both the time and the strategies needed to insure that students learn to **"think about and through"** our discipline. Rather, we short-circuit matters and just teach "chemistry" or "mathematics." The result is frustration: frustration as too few students come to know and appreciate the theory of the discipline that so excites us; further frustration as many students memorize and forget the "materials" we teach. Here our project suggests that, at least in some key courses in every department, the exploration of the process of thinking in the field must be central to the course. If we expect a very high order of thinking in our field, one "methods" course won't do it. For this reason, thinking across the curriculum is not only an agenda for the curriculum as a whole, it would appear to be an important item to put on departmental agendas as well.

*Members of the consortium of East Central Colleges are: Heidelberg College, Hiram College, Marietta College, Mount Union College, Muskingum College, Otterbein College (all in Ohio), Bethany College (WV) and Westminster College (PA).

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By Professor GRINER

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Shared Course, Shared Community, Shared Knowledge: A Model for Integrity in the Humanities Curriculum

In the few minutes that are mine this morning I'd like to advocate a cause, engage you in controversy, make a very modest proposal. To wit: **Let's design and place courses in the college curriculum which require that a sizeable percentage of the faculty [30-40%] and student body [80-100%] of a specified learning community engage in the study of a common set of text-based issues. Let's do this in an efficient large lecture, interdisciplinary format with weekly small group discussion sessions focused on primary texts. And let's do this so that our teaching models connections, connectedness, coherence, and the empowerment of the learned generalist, rather than fragmentation, specialization and the priesthood of the specialist.**

I make this pitch in the context of the curriculum debate begun by such reports on higher education as "Integrity in the College Curriculum," "To Reclaim a Legacy," and College: The Undergraduate Experience in America; a debate amplified for public consumption in best sellers such as Cultural Literacy and Closing of the American Mind, then returned to the academy in such recent studies as Lynn Chaney's "Humanities in America" and the ACLS response, "Speaking for the Humanities." However, I hope that my pitch will put a new spin on the ball.

At the center of most of these works is a debate over what student's should know and how we should go about teaching them what we should know. We hear a lot about core curriculums, literary canons [those that bang and those that whimper], a cultural tradition, a pluralistic nation, WASPs and

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WEMPs, great ideas, great books, specialization vs. cross-disciplinary study, . As I read the above [Boyer, I think is a notable exception], the focus seems to be on **THEM**, on students: what they don't know, what they should know, and how we can insure that they know it. When the analysis becomes jeremiad, as it does most astringently in Bloom, the cry is long and loud: "Woe is **THEM**, for they dwell in great darkness."

Right in the middle of the "who is thems," I suggest we tug a couple of times there in the oily clump of hair behind the ear, resin up our fingers and get set to put a different spin on the ball. I suggest that we look in the mirror, I look at our colleagues in the teaching profession, and I cry out, "Woe is **me**, Woe is **us**."

Quite often in academe professors wearing elaborate blinders of the discipline lead students on a search through the dark rooms academy in a quest for the black cat of wisdom." The Philosophy professor who never had Calc and has forgotten the algebra she once knew; the Chemist who couldn't work art history into her lab schedule and still can't quite make room for a night at the symphony or afternoon at the gallery in her busy schedule; the newly minted Economist who blushes to say that reading Smith and Marx weren't really a part of his quantitative training in the field; the music theorist who reads elaborate counterpoint but knows nothing of modern physics; these folks and their kind sit on the faculty curriculum committee which, after long debate, requires **all** undergraduates at Veritas College to take courses in a variety of areas: courses essential to the good life, courses necessary for the common good, courses vital to the national interest. Courses which we professors have forgotten, which we professors have not taken, courses without which we earn our bread, without which we cast our votes, smile our smiles, and cry our tears. Courses essential for them,

unnecessary for us. Courses without which they will remain culturally illiterate and without which we pass judgment on their moral and intellectual accomplishment and worth. Perhaps this approach to curriculum development and revision will lead us to coherence in the curriculum, but integrity in the curriculum? Let's not sully that good word. To have integrity in the curriculum we need to look at both **us** and **them**.

At Bethany College up in the northern panhandle of West Virginia we have made some progress toward integrating ourselves as professors into the general education curriculum we require of students. Three courses are in place which foster this sort of integrity in learning. A larger discussion has also begun about ways in which the faculty might go about demonstrating, modeling, and acquiring all aspects of general learning mandated for students by our distribution requirement. That much integrity we may not be ready for, but at least an inquest into the matter is under way.

Right now I want to share with you something of the data base which fuels the debate about integrity in the curriculum on our campus. I want to share with you a model course which encourages me and some of my colleagues as we argue that a college curriculum will truly cohere when we who profess it are coherent with it, knowledgeable of it, and passionately involved in the learning that lies at its core. Presently, as I've indicated above, I fear that we ask more of our students than we ask of ourselves. The result is a dis-integration of the curriculum which is fundamentally moral in character. What we do lacks coherence because we lack the integrity to model what we mandate. No wonder there is a crisis of authority in higher education today.

But this need not be so and I will sight one small example of what happens when it is not so. In 1984 Bethany College, with funding from the National Endowment for the Humanities, Bethany offered the first of three courses which operate under the general banner of "Origins of Western Thought." The three courses cover the development of Western thought from the Greeks to the present and are all developed around primary texts. Presently we are sketching out a fourth text-based course in non-Western thought to complete the sequence. All of these courses are interdisciplinary in nature and required of Humanities majors. The one which deals with issues in modern thought is required of all first year students. It is the focus of my presentation today.

In this large lecture course called "Origins of Western Thought: The Modern World" we have done considerable assessment. Our data suggests the following hypotheses:

1) large lecture courses can be effective, as well as efficient, mediums for instruction;

2) they can be so IF they are supplemented by weekly small group discussion sessions and IF they are taught by persons well aware of student cognitive development models and teaching/learning styles;

3) a great advantage accrues to the whole curriculum if you can assume that several hundred students and 30% or so of your faculty have heard the same lectures and read the same texts - connections can and will be made because there has been shared learning;

4) because connections are made again and again across the curriculum, because the knowledge from such a course is knowledge shared by a community, student learning in the course area continues after the course has ended [we can demonstrate that students actually have greater knowledge of the course content of "Modern World" at the end of the senior year than they had at the end of the course

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in their first year];

5) Finally, faculty report both a sense of professional renewal and a satisfying sense of shared community as a result of participating in this shared learning experience.

"Origins of Western Thought: The Modern World" was first offered in 1983-84. This 4 credit course employs a lecture/discussion format. Three lectures are given each week to sections of about 130 students. Once each week students meet in small groups for discussion sessions. It is at once thematic, issue-oriented, interdisciplinary, and historical. Four contemporary issues are studied each year. Each issue is given 3-4 weeks of class time. It is studied from its origins as a problem in modern Western thought [beginning usually in the late 17thC] to its present shape. Considerable attention is given to primary texts. Background material is presented through lectures.

In its early years the course was team taught. Presently, and quite deliberately, the course has one primary lecturer. This choice was made to model for new students the idea of coherence and "connection" in the life of the educated person, rather than to reinforce their affinity for specialization and specialists.

Most important to the success of this course is the nature of the weekly discussion groups. These groups are led by faculty [14-16 per semester] who attend lectures, read the common texts, and supervise all writing done in the course. Participation of the faculty in lecture, reading, and discussion lies at the heart of the success of this course as we shall see when I turn to assessment data.

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Simply put, through the "Origins" sequence, Bethany College has tried to create a community of shared knowledge and shared concerns.

Assessment to date shows two remarkably happy results and raises up certain tough and prickly issues.

The good news first. In May of 1987 a study of seniors who took the "Modern World" course in 1984 was completed. The results were as follows:

Content Knowledge Profile: Bethany College Class of 1987

1984 pre-test average	7 of 26
1984 post-test average	14 of 26
1987 re-test [1984 test] average	16 of 26

Among other things, this study showed that the Class of 1987 had a slightly better command of the actual content of "Modern World" in their senior year than they had possessed at the end of the course itself. They had moved from average freshman scores of 14 of 26 to average senior scores of 16 of 26. Few of us expected such positive results. Most of us hypothesize that the rising learning curve resulted from the constant reinforcement of content explored in "Modern World" and deliberately repeated and reexamined by the army of faculty who have also shared in the readings, lectures, and discussions which make up the course.

A survey of faculty who have participated in the "Origins" sequence reinforces the hypothesis set forth above. The survey was made of all faculty members presently on campus who had participated in the "Origins" sequence. 15 of 16 forms were returned. The results are as follows:

Impact of Origins Sequence on Faculty Development and Renewal:
15 responses from 16 Origins faculty on campus
total full-time faculty = 40

☐☐ acquired new basic knowledge....5.1 on scale of 7 = Strongly Agree
☐☐ refreshed basic knowledge.....6.6 on scale of 7 = Strongly Agree
☐☐ use in other classes I teach.....5.6 on scale of 7 = Strongly Agree
☐☐ enhanced the sense that I teach in a community of shared knowledge.....5.8 on scale of 7 = Strongly Agree
☐☐ important/useful renewal .....6.1 on scale of 7 = Strongly Agree

Although Bethany reports an FTE faculty of 55, I count 49 full-time bodies as I read the directory, and only full-time faculty are invited to participate in the "Origins" sequence. This means that about 30% of the faculty has participated in the sequence to date. Three faculty members are participating as discussion leaders for the first time this semester, so our percentage of faculty is rapidly approaching 40%.

That's the good news. The bad news is that the pull of specialization is felt very strongly against the tug of connection even in our small, rather idyllic, setting. This negative tension, I think, mirrors those things we so properly call "divisions" in higher education. In this instance the "negative" point of view comes from those in the Sciences toward a course sequence originating out of the Humanities. Were the shoe on the other foot, there would probably be a shift in the pinch. Much more sharing must go on before full community is achieved across our own "divisions."

This also appears true of our students. While most the Class of 1987, our guinea pigs for this experiment in shared learning, became slowly reconciled to the "Modern World" course and its purposes over their four

years, a good number remained aliened from it. This was particularly true of our male students. Though no break-down is available of student response by major, it is quite clear at Bethany that the Humanities majors are much more likely to be female than male. It should also be noted that no faculty from the Economics, Business, Accounting program [our largest] has participated in the "Origins" sequence, nor have members of the Computer Science faculty.

Finally, a teaching/learning style problem seems also to emerge from our bank of data. Preliminary analysis of Myers-Briggs Type Indicator scores suggests that students with strong "S" (sensory) preferences do not seek out or do as well in the "Origins" sequence. These persons seem to share much in common with those learners identified by David Kolb as "convergers" and "accomodators." Much, I suspect, needs to be done to bridge a learning/culture/type preference gap between those of us who are "text" oriented, who are intutitive learners, and who would think and live another way. Maybe it is here, as well as at the level of basic knowledge, that much sharing must occur if meaningful and lasting connections are to be made within a liberal arts curriculum.

In conclusion, I ask that we begin the serious business of practicing what we preach as we attempt to bring coherence and integrity to the undergraduate curriculum. We must be concerned with what our students don't know, what they should know, and how they can come to learn these these things. But in a world where the center wants not to hold, the matter of common knowledge, coherent education, shared values, and an integrated self is not just their problem. It is ours as well. We have much learning to do along with them. Our presence in their classrooms as co-learners is a powerful thing. As students watch us struggle to obtain the

general knowledge we require of them, education is both democratized and demystified. As they watch us attempt to integrate cross-disciplinary knowledge into our specializations we model the integrity [and the difficulty which attends the quest for it] in our teaching.

I have met the enemy and it is us. I have also seen something beyond the chaos. And it comes from shared courses, shared learning, shared community, whether this is achieved at the departmental level, the divisional level, or college wide.

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Humanities in the South Spring 1989

Doing the Text

Mark Clark
Larry Grimes
Roger Johnson

Studying the humanities is not a spectator sport. Neither is the teaching of humanities a priestly function. The purpose of this note is briefly to present three teaching strategies that encourage students to work actively with texts and to demystify the process of thinking about them. We developed these strategies in quite different humanities programs at Bethany College (WV) and the University of Southern Mississippi, each program sponsored by the Fund for the Improvement of Post-secondary Education. A second purpose of this note is to encourage colleagues to share strategies in like manner.

In teaching Cicero's work on duties, Clark (USM) encourages ethical thinking through focus on the third book, which deals with the distinction between action that is morally correct and action that is expedient. An aim is to bring the students to encounter the same difficulties Cicero had in finding a solution. Through lecture Clark provides the intellectual and historical context of the ethical problem. Although passive, this phase of learning is necessary so that students have a context for understanding Cicero's task. The active phase begins when students find examples from their own experience in order to recast and personalize the moral dilemma. Activity continues to the stage of writing as students compare their solutions to Cicero's solution. On this basis they may evaluate the degree to which Cicero was successful in formulating a solution.

When teaching introduction to poetry, Grimes (Bethany C) proceeds to teach "from the inside out," in order to provoke esthetic thinking. While introducing students to a variety of poems in a rather traditional lecture fashion, he also asks students to create their own poetic texts. Students are given a procedure for creating the germ of a poem, then asked—stage by stage—to modify the diction and to incorporate images, similes, and finally metaphors. During the process they maintain journals in which they record daily reflections on the changes they make in their emerging poems. The result of this active reflection on the way in which poetic elements interact enables students to engage in the analysis and discussion of poetry written both by their peers and by established poets. Poetry is therefore studied as human activity rather than as printed page.

Johnson's (USM) course on the culture of Ancient Egypt includes readings from a variety of texts. One aim of the course is to cause students to think actively about the process of interpretation. The strategy is to teach very elementary ancient Egyptian language in hieroglyphs so that students can translate selected phrases into English. Individuals' translations will vary considerably and validly, reflecting the ambiguity of scholarly knowledge about tense and mood. By design, students later encounter the same sentences in the translated texts that constitute their primary readings. At that point they are able to bring their own interpretations to bear within a literary context.

Through these and similar strategies, students are provided with skills necessary for engaging actively in ethical, esthetic, and interpretive thinking. The result is that students do not just passively receive texts; they "do" them. They interact with texts and transform them, apply the texts and extend their meaning.

Bethany College (WV)
University of Southern Mississippi

DEADLINES

May 1: Humanities and Technology. Abstracts of papers for possible presentations at a conference on the humanities and technology, to be held in October in Marietta, Ga. Contact: Charles Weeks, Department of Humanities and Social Sciences, Southern College of Technology, 1112 Clay Street, Marietta, GA 30060.

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APPENDIX K

Sample Newsletters

ECC NEWS

EAST CENTRAL COLLEGES

AP 88

BETHANY • HEIDELBERG • HIRAM • MARIETTA • MOUNT UNION • MUSKINGUM • OTTERBEIN • WESTMINSTER

ECC TOPICS

Bill Perry In Person

"We haven't seen anything like this."

So said Bill and Mary Perry at the wrap-up of the Fipse project on March 12-13 at Mohican. They have travelled to 70-80 colleges, many of them elite, and remarked on ECC participants' spirited sharing of exact details about teaching.

William Perry's essay on cognitive and ethical development served as the anchor for the consortium's three-year $246,000 project in critical thinking.

He narrated several anecdotes during his own two-hour Saturday evening talk. One of them acknowledged, ironically, the need to "trust the professionals you don't trust." He described his own book as "so much obviousness...set forth in such order."

In discussion of a case study, Perry urged ECC faculty not to over-value students' "progress," but rather to help them celebrate a vivid sense of the present, even if now is full of disappointment. The student alive to the present, he explained, is open to uncertainty whereas the student who learns to conceptualize has closed the present by turning it into the past.

College by College

The showstopper from Bethany at the Mohican wrap-up was Bob Myers (philosophy) who recounted through dozens of overheads "The Evolution of a Syllabus." In the innocent age before Chicago and Fipse, his perfectly fine syllabus was three pages long. It grew to fifteen pages--including instructions on six major writing assignments, explicit policies, quotes from philosophers, a cartoon, and a table of contents.

From Muskingum Bob Burk (history) exulted in having broken from a stock lecture course to providing students with sociological data and asking them to write a capsule social history. Other exercises prodded students to assume the actual role of historian.

Muskingum's Al Chaffee (English) intrigued colleagues with his creative use of metaphor as a tool for critical thinking. He said he cuts up sonnets, distributing lines and asking students to re-assemble the poems. He asks them, literally, to bounce one poem off another and to describe what happens.

Larry Normansell (biology) broke down the division between lab and lecture by stopping lab to explain ideas or techniques at critical junctures and by inviting students to bring their lab experiences as ongoing problems into the lectures.

The Hiram team offered a report by Matt Hills (biology) on encouraging discussion.

He gave students an explicit structure for reading and discussion and also asked students to evaluate their group as to members' positive and dysfunctional roles in discussion.

Sigrid Anderson (German) reported using creative writing exercises.

Susan Schroeder (art) climaxed her report on requiring students to go to art exhibits with the story of three football players. On the night before the big game, they fell into an extended discussion of the artwork in their Holiday Inn room.

Rea Knight (biology) emphasized his wish to have students understand the uncertainty of lab measurements. Or: "The answer is maybe, and that's final."

The Marietta team was unusual in having six scientists on it this past year. They reported extraordinary success through several strategies. Whit Hancock (physics) organized students into teams, seated in rows that rotated forward weekly. He called on a group rather than on individuals in class discussion. He also observed the need to shift activities every 8-10 minutes as short-term memory fills up.

Bill Homan (chemistry) handed out lists of key terms for students to look up, graded homework for every class day, gave students time to work problems in class, and told students where he was going in his lectures instead of holding back answers. Students' averages improved by 10 points.

From Otterbein Earl Hassenpflug (art) gave a slide-illustrated report on students' articulated awareness of the creative process through doing sculptures.

From Heidelberg Denise Marshall (English) demonstrated the classroom use of Back to the Future as a means of getting students to observe and to notice what they observe.

John Bing (political science) demonstrated how to encourage students to consider the same current event from a sociologist's perspective or from a psychologist's perspective.

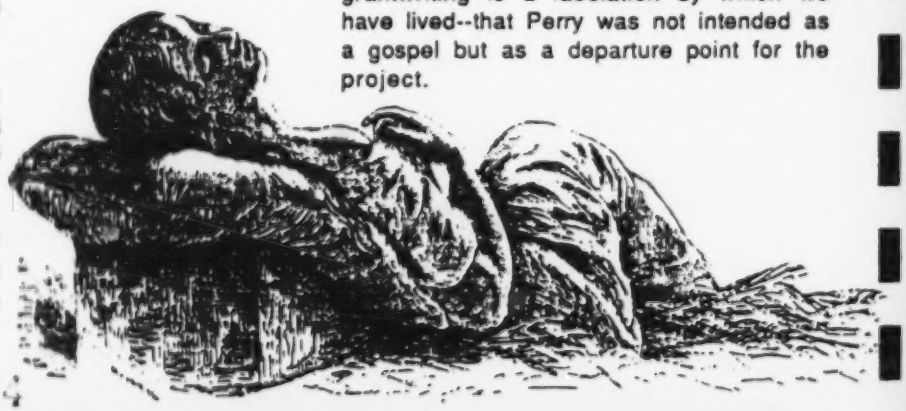
For Mount Union Art Murdoch (chemistry) confessed that his urge to operationalize the teaching of critical thinking skills had endangered his awareness of more abstract goals.

Westminster was not represented at the conference.

Remarks from Larry and Faith

In closing remarks at the Mohican weekend, Faith Gabelnick observed that the multitude of sometimes small changes made by ECC faculty during the Fipse project were really "sea-changes." She disavowed having entered the project with any intent to emphasize the syllabus--that focus emerged through a question-answer period at one of the early meetings and from some impromptu notes thrown onto the blackboard. She thanked participants for their courageous joy and trepidation in sharing their syllabi and for discovering in the climate of learning a love for colleagues and for students--even those whose presence is troublesome.

Larry Grimes (Bethany) recited a list of disseminators in critical thinking within the consortium--himself, Steve Blume, Phyllis Kitzerow, Nancy Siferd, and Ken Porada. He contrasted the uncertainty of the first-year teams and the ease of second-year people in valuing the first-year groundwork--"We are the experts we were trying to find." He also acknowledged that grantwriting is a fabulation by which we have lived--that Perry was not intended as a gospel but as a departure point for the project.



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Fipse Dissemination

The consortium has scheduled a week-long workshop at Bethany in critical thinking, June 12-17. Paticipants who have not been members of the critical thinking teams are invited. Faculty who were on teams already will serve as consultants. See your dean.

Larry Grimes has applied for a grant from Fipse to fund a more lavish week--with outside consultants and more external consultants. Word on funding wil come in mid-April--chances are steep (8:1). The week being tentatively considered is August 15.

Deans have received a flyer from a colleague of Faith Gabelnick at Western Michigan. Lynne McCauley is organizing a conference on "Content/Skills: A Time for Synthesis." Faith encourages ECC critical thinking participants to send a 500 word summary and a 50-word abstract by May 1.

The conference is responding to E. D. Hirsch's challenge in Cultural Literacy:

> There is no insurmountable reason why those who advocate the teaching of higher order skills and those who advocate the teaching of common traditional content should not join forces.

Send your summary and abstract by May 1 to: Dr. Lynne McCauley, Intellectual Skills Development Program, WMU, Kalamazoo, MI 49008-5035. (Phone: 616-383-8062).

An OHC Proposal In the Works

The Ohio Humanities Council has received a preliminary proposal from ECC, called "The Opening of the American Mind."

The project would present Allan Bloom's book and readings from four philosophers for intertextual discussion. Bloom complains in The Closing of the American Mind that educators aren't doing the job. We've abandoned the Western tradition's emphasis on the life of reason, he says, having sold out to job skills, to critical thinking, and to pragmatics or popularity.

The five programs in the series, each to be repeated on four ECC campuses, would examine Plato, Kant, Nietzsche and Dewey to see what turns of thought they represent in the Western tradition. Can Bloom's grief be laid at the feet of educators, or does it reside in the Western philosophic tradition? Do the philosophers say what Bloom says they say?

Wallace Martin, Professor of English at the University of Toledo and consultant to ECC at Princeton, will keynote the series at each designated site, if the project is funded.

OHC's feedback on the draft is encouraging. The duedate for the final proposal is May 6.

By the way, Robert Scholes of Brown University (also a consultant to ECC at Princeton) has reviewed Bloom and Hirsch in the March issue of College English.

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An ECC Week on DNA

Signs are strong that NSF will fund ECC for a $25,000 week for 20-25 ECC chemists and biologists who want a week of training in laboratory techniques in molecular biology. Cold Spring Harbor's mobile van will come to Bethany in the summer of 89.

Lecture Series Expands

For 1988-89 each college will sponsor four appearances by the following lecturers or performing artists on campuses other than their own:

Bethany

Larry Grimes (English)
"The Religious Odyssey of Ernest Hemingway"

Stanley Becker (computer science)
"Global Energy: The Misunderstood Child"
"Patently Absurd: The New Era of Genetic Determination in Food"
"The Great Butterfat Debate: Propagation of the Vitamin Craze"
"Creative Problem-Soving: Provisional and Probable"

Al Ossman (politics and public policy)
"Contemporary Public Policy-Making in Washington: Iron Triangles, Issue Networks and Garbage Cans"

Heidelberg

Woodwind Quintet
(Susan Schultz, flute; Ed Bloedow, oboe; Barb Specht, clarinet; Jeff Snedecker, horn; Cynthia Ciofarri, bassoon)

Hiram

Tom Hellie (theatre)
"White Man on a Horse: Myth of the Lonely Hero in American Life"

Marietta

Jim O'Donnell (history)
"Writing Native American Indian History"

Val Garoza (art)
"Painting The Amazon"

Mount Union

Lyle Crist (English)
"Ain't They Teaching English No More?"

Muskingum

Robert Jones (music)
"The Art of The Arts Song"

Otterbein

Phil Barnhart (astronomy/physics)
"The Limits of Science: Why Everything We Know Is Wrong"

Norm Chaney (English)
"How We Can Talk About Human Nature"

Westminster

Jim Perkins (English)
"A Poetry Reading"

Alex Starr (theatre)
"Readings and Commentary"

Nancy James (English)
"A Poetry Reading"

Peggy Cox (art)
"The Process of Painting"

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ECC GRANTS

Bethany **Grants**

Kent Clinger (chemistry) has been awarded $50,000 to co-direct with Robert Paysen a 6-week NSF Young Scholars program this summer. About 25 high-ability high school students will come to Bethany to work on a "Northern Appalachian Water Quality Study." The project may be renewable for the following summer as well.

Hiram **Grants**

Through an annual grant from Louise and Kenneth Deemer, Hiram presented an all-day series of lectures and discussions entitled "AIDS and Society." A luncheon of bread and soup enabled attendees to contribute to the Western Reserve AIDS Foundation.

An alum and former trustee, Hap Pritchard, recently completed the second phase of donating 100 acres of land to the college as an addition to the 140-acre Barrow Biological Field Station.

Hiram's Lectures in Religion Series continues for its eighth year this April, now fully endowed after friends matched challenge grants from the Oreon E. Scott Foundation.

This year's speaker is Dr. William Baird of Brite Divinity School at Texas Christian. He will give three lectures over two days on "Reason vs. Experience: Diests and Pietists" and "Science vs. Dogma: Grammarians and Historians."

Mount Union **Grants**

Gerald Ford and Edward Heath (former prime minister of Great Britain) will headline the inaugural program in the Schooler Lecture Series next year. The Schooler Foundation has underwritten the series.

Muskingum **Grants**

Bob Burk (history) has received a Summer Stipend award from the National Endowment for the Humanities. The $3,500 grant will provide funding to assist Bob in researching primary documents for his upcoming book, The Corporate State and the Broker State: the du Ponts and American National Politics, 1920-1940.

GTE North has awarded $10,000 in support of the Appalachian Children's Theatre Series. The series, designed to bring professonal children's touring theatre to primarily elementary and secondary schools in southeastern Ohio, is a collaborative project designed by Muskingum and Rio Grande Colleges. The proposal was prepared by Jerry Martin.

Otterbein **Grants**

Chrysler Corporation has matched the personal gift of alums Frank and Mary Jane Kline Van Sickle to purchase $20,000 worth of new publications equipment for the Kline-Van Sickle Student Publications Laboratory.

ECC FACULTY

Bethany Faculty

James E. Allison (mathematics) was selected as 1986-87 Professor of the Year by Bethany students.

Robyn R. Cole (English) was appointed a regional judge for 1987 Achievement Awards in Writing, competitions sponsored by the National Council of Teachers of English.

Dr. Lynn Adkins (sociology) is liaison for the state of West Virginia for the national Association of Social Workers' campaign to raise $10 million to establish the national Center for Social Policy and Practice, to be located in Washington, D.C.

Dr. Ann Shelly (education) has been reappointed for another term on the Committee on Accreditation of the American Association of Colleges for Teacher Education.

Al Ossman (politics and public policy) serves on an advisory group to an Internal Revenue Service Commissioner.

Larry Grimes (English) and Nancy Siferd (ECC/Heidelberg) have co-authored "ECC Faculty Development in Ways of Knowing," to be published in proceedings from the Annual Conference on Nontraditional/ Interdisciplinary Learning at George Mason University (April 1988).

Heidelberg Faculty

Philip Harner (religion) will publish a book, Grace and Law in Second Isaiah, in the fall. He also had an article published in Interpretation (April 87), analyzing the relationship between divine grace and human activity in the Lord's prayer.

Pat Guitteau (librarian) has been chosen Library Supportive Staff Member by the Ohio Library Association. She works in three Tiffin libraries (city-county, Tiffin University, and Heidelberg).

Jay Mann (music) directed the Heidelberg College Concert Choir at the Ohio Music Education Association's state convention last year.

Norm and Pam Wurgler (music) performed as guest artists at the Allegheny Summer Music Festival.

Jeremy Cripps (accounting) completed a research report for the National Council on Public Works Improvement. The report involved earmarking government revenues.

Mark Gridley (psychology) published "Trends in Description of Saxophone Timbre" for the journal Perceptual and Motor Skills.

Susan Schultz and Nancy Lendrim (music) presented a recital in Perrysburg last fall.

Ken Davison (American Studies) is a consultant for the Ohio Studies Task Force on a series of instructional television programs on Ohio history. He has also won a grant to study in Canada this coming summer.

Bob Joyce (lifelong learning) published a paper on the ECC assessment process in proceedings from George Mason University's Annual Conference on Nontraditional/Interdisciplinary Learning (1988).

Pete Richards (water quality) has published "Pesticides in rainwater in the North Eastern United States," in Nature. The article has been reprinted in 19 foreign countries and in 27 states. He has also published "Pyrite Crystals from the Duff Quarry" in The Mineralogical Record. A third article has been published in Water Resources Research on sampling strategies.

Hiram **Faculty**

Russ Aiuto (president) has been named by Gov. Celeste to an eight-year term on the Ohio Higher Education Facility Commission. The group oversees acquisitions and operations for the state's educational facilities and properties.

Marietta **Faculty**

Owen Hawley (English) published "Two from Marietta's Mound Cemetery" in The Tallow Light (July-September, 1987).

Charles Pridgeon (English) wrote "The Written Word" for The Civil War in the North: A Selective Annotated Bibliography.

Rick Shriver (mass media) published "Atmosound: A Construction Story" in The Sound of Engineering Magazine (September-October, 1987).

William Buelow (music) published Psalm of David with G. Schirmer Inc., New York. He gave a lecture-demonstration on songwriting for the New York City Council of the Arts "Meet the Composer Series" and several performances, Adirondack Festival of American Music (NY), July 4-August 4, 1987. He also went on a five-college tour, performing with Rosalind Rees at Marietta, Ohio University, Wittenberg, Cincinnati, and Duquesne. In addition, he performed at the Charles Ives Center for American Music (New Milford, CT).

Mark Davis (music) was guest artist with the N.Y. Festival Orchestra on the Hudson, July 4, 1987.

Fraser MacHaffie (economics) published "Union Navy" in The Civil War in the the North: A Selective Annotated Bibliography. He wrote "Summer of '40: Plans Gang Agley" for Clyde Steamers (Spring 1987).

Ed Osborne (accounting) wrote "Business Start-up Model Lotus 1-2-3 Template" and "Business Comparison Model Lotus 1-2-3 Template", small business planning software currently being used by 125 colleges and universities throughout the U.S. and Canada, 1987. He also wrote "Ohio Food Stamp Data Management System", and "Ohio Work Program Data Management System", designed for seven county departments of human services in Ohio, 1987. Last September he completed his term as president of Keystone Mountain States Council of the National Association of Accountants.

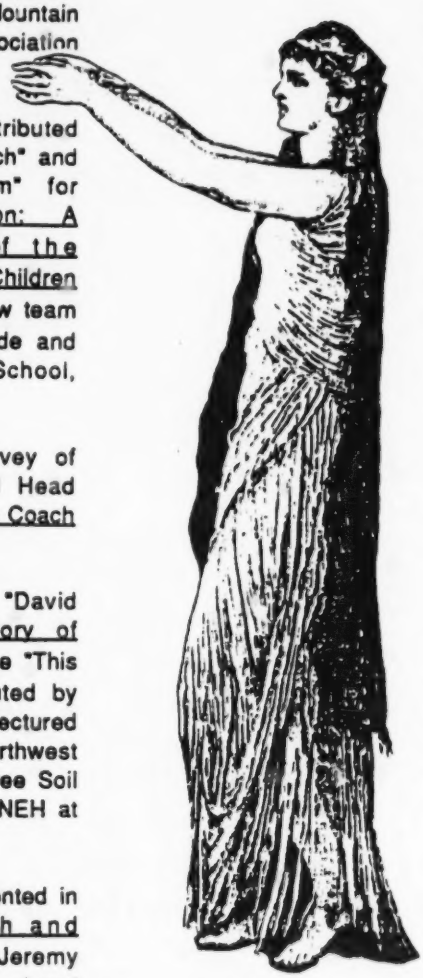
Forrest Keesbury (education) contributed "The Hagge, Kirk, and Kirk Approach" and "The Forstig Remedial Program" for Encyclopedia of Special Education: A Reference for the Education of the Handicapped and Other Exceptional Children and Adults. He served on a review team for the National Association of Trade and Technical Schools at Lawton School, Columbus, OH, last September.

Dave Brandt (HPE) wrote "A Survey of Leadership Styles of High School Head Coaches in El Paso County" for Texas Coach (September 1987).

Robert Hill (history) contributed "David June" for the third edition of History of Political Philosophy. He also wrote "This Year's Other Bicentennial," distributed by Public Research Syndicated. He lectured "Was Lincoln Right About the Northwest Ordinance?", in a conference on "Free Soil and the Constitution" sponsored by NEH at Ripon College last fall.

James O'Donnell (history) is represented in Great Lives From History: British and Commonwealth Series under "Jeremy Bentham"; "Guy Carleton, Lord Dorchester"; "Thomas Gage"; "William Howe".

George Banziger published "Pets and Aging" in Encyclopedia of Aging and "When Jack and Jill Go Up the Hill: Vicissitudes of the Generalist Social Psychologist at a Small College" in Contemporary Social Psychology (1987). Until 1988 he is vice president of Ohio Network of Educational Consultants in Aging. He consulted on issues in aging in Marietta, Parkersburg, and Rochester, NY; he consulted on jail officers in Marietta.



Almuth T. Schunko (biology) published "Genomic Organization and Developmental Fate of Adjacent Repeated Sequences in a Foldback DNA Clone of Tetrahymena Thermophila," Genetics (November, 1987).

Bob Cayton (library) edited The City of Marietta, Ohio: 1788-1987, A Bibliography (1987). He also edited Kathleen L. Clark's Reflections of the Past: The First Hundred Years, A Bicentennial Collection of Historic Photographs, Marietta, Ohio, 1787-1987 (1987).

Jeanne Tasse (art) instructed a class in calligraphy, Cedar Lakes Craft Center Weekend, Riply, WV, last November.

Deb Lazorik (HPE) completed her term as president of Ohio Athletic Conference Women's Basketball Coaches in 1987. She also chaired Primary Women Administrators, Ohio Athletic Conference, into 1987.

Phillip Roach (HPE) is president, Ohio Athletic Conference, 1987-1989.

David Boyer (sociology) attended an NSF-Chautauqua short course on forensic anthropology in Memphis last spring.

William Brown (biology) attended a short course on "Computers in Biology" at Notre Dame last summer.

Hans Gilde (chemistry) took an ACS short course on "Near Infarared Spectroscopy: at Atlantic City last spring. He took another ACS short course on "Synthetic Organic Chemistry: Modern Methods and Strategy" in New Orleans in August.

Larrie Hutton (computer science and psychology) is vice president of the Southeast Ohio Psychological Association until 1988.

John Michel (mathematics) completed his term as Secretary-Treasurer of Ohio Section of Mathematical Association of America. He consulted on problems in trajectory optimization for interplanetary space missions at Jet Propulsion Laboratory, Pasadena, CA, last summer.

Sherrill Cleland (president) chaired the Association of Independent College and Universities of Ohio until 1987. He was

also secretary, Ohio Foundation of Independent Colleges, in 1987; he chaired the Independent College Advisory Council to the Chancellor of the Ohio Board of Regents in 1987; he was treasurer of the Board of Trustees and Executive Committee of the Student Loan Funding Corporation in Cincinnati, OH, in 1987. Cleland and Gwendolyn Jensen (dean) were evaluators for North Central Association of College and Schools.

Steven Blume (English) served as consultant to departments of English and Speech and Business at Parkersburg Community College, Parkersburg, WV.

Gerald Evans (English) was a summer consultant for Knopf in the proposed revision of the Borzoi Handbook for Writers.

Rick Shriver (mass media) consulted on "The Backbone of Pennzoil," a Pennzoil videotape on occupational safety, in 1987.

Ronald Loreman and Kent Nelson (speech and theatre) adjudicated for one-act plays and individual college-bound auditionees for one-act plays and individual college-bound auditionees at the State High School Thespian Festival, Ashland College, last April.

Wayne Wall (speech) was consultant to three corporations, Marietta, OH and Parkersburg, WV. last fall.

William Hartel (history) was Visiting Humanist for the Redbrush Project at Rio Grande College last October.

Neil Bernstein (mathematics) consulted for the College Board in Charleston last spring.

Mount Union Faculty

Receiving Faculty STAR (Summer Travel and Research) grants are:

* Henry Fischer (sociology) for doing research at The University of Delaware's Disaster Research Center and for completing a chapter in the "Sociology of Disaster." He also co-conducted a year-long research project for United Methodist churches in East Ohio. He is now reviewing for Sociological Spectrum.

* Walter Ullrich (education) for study of small groups as used in teacher education.

* Angela Zumbar (education and Spanish) for attending an education seminar in Argentina, Paraguay, and Brazil.

Gloria Malone (English) is now a consultant-evaluator for NCA. She is also table leader for essay reading of the National Teachers' Examination (NTE).

James Walton (English) serves as reader for Educational Testing Service.

Perry Honaker (library) serves on the Computer Committee for the Ohio Educational Library/Media Association.

A play by Lyle Crist (English) was selected for formal reading and critique by the Ohio Theatre Alliance. The play is a stage adaptation of Crist's biography of a '54 alum who was the third person in the world to earn a college degree while deaf-blind.

A piece by Lewis Phelps (music) was performed at Arizona State. "Epitaphs" is for voice, oboe, and harpsichord.

Gary Funk (music) recently sang in Distler's "Totentanz" and Bach's "Cantata 106" in Canton.

Jim Dillon (mathematics) was the college's Great Teacher for 86-87.

Ferald Bryan (speech and theatre) published "Vico on Metaphor: Implications for Thetorical Criticism" in Philosophy and Rhetoric. He authored a chapter on Henry Grady for American Orators before 1990: Critical Studies and Sources.

Kathy Piker King (sociology) has been reappointed to the development committee of the North Central Sociological Association. She has co-authored "The Differential Perceptions of Male and Female Deviants" for Sociological Focus.

Carl Kandel (music) adjudicated for the Akron All-City Band-O-Rama and for Toronto (OH) High School Invitational Band Competition. He guest-conducted bands for the Portsmouth (OH) All-City Music Festival. His brass choir returned to the National Cathedral in Washington, D. C., to perform on Easter Sunday. For 19 years the group has performed there on either Palm Sunday or Easter Sunday.

Bob Wiese (geology) co-wrote "Spontaneous formation of hydrated iron sulfates on laboratory samples of pyrite- and marcasite-bearing coals" in Chemical Geology. He published "Wellsville Hell: Exposures in the Pennsylvanian Allegheny and Conemaugh Groups of Eastern Ohio" in Geological Society of American Centennial Field Guide.

Richard Doyle (history) wrote "A Comparison of Economic Development and Wealth Mobility in the Dutch Colonies of Pella, Iowa, and Holland, Michigan, 1850 to 1880" in Journal of Ethnic Studies.

Commentaries (1976) by George Thomas (philosophy) has been reprinted by Garland. It concerns George Berkeley.

Art Murdoch (chemistry) attended an ACS short course in infarared spectroscopy in New Orleans.

Muskingum Faculty

Bob Jones, Steve Kokovich, and Bill Schlacks (all in music) served as NCA evaluators.

Judith Knight (chemistry) attended an ACS short course in polymer chemistry last May.

Bob Munkres (political science) published ten newspaper articles in heroes, Memorial Day, SMU, honor, liberty, and the Constitution. The newspapers are in Ohio and Nebraska. He also reviewed the California Trail, Yesterday and Today, for Journal of the West, by William Hill.

Kathy Miller (English) has published three stories: "The Boys from this School" in The Missouri Review; "Substituting" in The Nebraska Review; and "Shopping" in Lactuca. Her video "Rootwings: For the Children" has been distributed via Vermont Women's Television Public Access Network. She has also recently published on "Anti-War Tax Tips," "Telling 'Her-Stories,'" "Overcoming Obstacles in Tech Education," and "Notes from an Interview" (Vanguard Press, Vermont Woman, and Kingfisher).

Ed Barrett (religion) has written "The Contributions of Charles Hartshorne to American Philosophical Theology" for Religion and Philsophy in America. He also wrote "Macquarrie" and "Moltmann" for The Encyclopedia of World Biography.

Charles Nelson (sociology) wrote "Some Thoughts on the Dynamics of Cultural Transformation" for Swedish-American Historical Quarterly.

Herbert Thomson (economics) contributed the chapter "The Scottish Enlightenment" for Pre-Classical Economic Thought.

Frank Triplett (foreign languages) has published his translation of "On The Critical Fortunes of Francisco de Zurbaran: Reflections and Inquiries" in Zurbaran by Yues Bottineau.

Vishnu Saksena (biology) contributed to Check-List of Fishes of the Eastern Tropical Atlantic.

Javad Habibi (mathematics) will appear in conference proceedings for MTNS. The paper was "P-reflexivity of Finite-Dimensional Algebras."

Gaile Gallatin (art) exhibited watercolors, gouaches, and drawings in Zanesville.

Ralph Hollingsworth (computer) reviewed software for the US Air Force.

Brent DeVore (president) now serves as president of the Ohio College Association.

Harold Hancock (emeritus--history) has received the 1987 Stephen Taylor Award for writings on the Revolution. Hancock's book is The Delaware State During The American Revolution.

Charles Dodrill (theatre) has won the JFK Center Medallion for his contributions to the American College Theatre Festival. Dodrill has chaired the theatre department at Otterbein for 30 years, bringing it to national recognition.

Paul Laughlin (religion) has published Lectionary Worship Aids: Series II, Cycle C and Remedial Christianity: What Every Believer Should Know About the Faith, but Probably Doesn't. Laughlin also leads the Liturgical Jazz-Arts Ensemble.

Elizabeth Stull (education) has co-authored Science and Math Enrichment and Kindergarten Teachers' Month-by Month Activities Program. Prentice Hall, the publisher, will also issue a book by Stull on teaching children's literature.

Tammy Griffin was Otterbein's NCR Computer Scholar for 1987.

Mary Beth Kennedy (HPE) has been named the OAC Coach of the Year.

Dick Reynolds (HPE) has been selected District 4 Coach of the Year by the National Association of Basketball Coaches.

Jim Perkins (English) made two presentations of prose and poetry at a Day of Poetry in Titusville (PA). The featured presentation was "What I Wish I had Known about Poetry When I was Growing Up." The Titusville Council of the Arts, the University of Pittsburgh, Titusville schools, and the Pennsylvania Council on the Arts sponsored the day.

Dr. Irene Sample (music) was recently honored as a "Distinguished Alumna" by her alma mater, Tabor College.

Westminster's Mock Democratic National Convention, now recognized as the second-oldest continuing mock political convention, was featured with a front-page story in The Chronicle of Higher Education recently. Westminster students chose Michael Dukakis for their presidential nominee and Albert Gore for vice-president.

Eva Cadwallader (philosophy) has been chosen to deliver the Henderson Lecture for 1988. Her topic is "The Machine Magic Fallacy and Other Philosophical Mistakes."

Nancy Mandlove (Spanish) has been named recipient of the Henderson Lectureship for 1988-89. Her research will focus on cultural differences which inhibit or distort North American understanding of Latin American life. The program was endowed by Dr. and Mrs. Joseph R. Henderson, Professor of Education Emeritus, to recognize and encourage on-going faculty research.

Ms. Peggy Cox (art) was accepted to show one painting in the Pittsburgh Watercolor Society and took second-place award. Another painting was accepted for The "Landscape at Creative Arts Workshop in New Haven, Conn. A work was also featured in an article in the watercolor issue of American Artist in March 1988.

Mary Hill (education) is president of the conference of the Center for the Expansion of Language and Thinking (CELT).

ECC EVENTS

March 9 — The director visited Westminster and Mount Union.

March 10 — The director visited Hiram and Marietta.

March 18 — A preliminary proposal to the Ohio Humanities Council was mailed from ECC.

March 27 — Flora Harper visited Hiram.

March 29 — Flora Harper visited Mount Union.

April 8-9 — The wrap-up for the NEH/ECC Princeton Project will be held at Otterbein.

April 15 — At Providence RI, the ECC director will co-direct with Faith Gabelnick a workshop on interinstitutional cooperation for directors of honors colleges in the Northeast. Critical thinking and narrative will be discussed.

April 15-16 — Wooster's "Conference on Independent Learning and The Liberal Arts" features Art Chickering, Lee Knefelkamp, Robert Tignor, and Ernest Boyer.

April 18 — The Assessment Board will meet at Mount Union to consider seven portfolios.

April 19 — Advisors to student literary publications will meet at Mount Union.

Directors of academic computing will meet at Mount Union.

April 22 — Librarians will meet at Otterbein.

April 24-27 — The University of Chicago's conference on critical thinking is held early this year. The title is "Teaching Critical Thinking: Campus Practice, Emerging Connections."

April 26 — Two presentations on ECC (one on faculty development projects and one on assessment) are set for a national conference at George Mason University.

May 1 — Abstract for ECC presenters on critical thinking and/or narrative is due. See news story on p. 3.

May 6	This is the duedate for ECC's proposal to OHC for "The Opening of the American Mind."
May 9	Flora Harper will visit Otterbein.
May 27	Deans and presidents will meet at Heidelberg.
June	A bonanza issue of this newsletter will feature reports and lectures resulting from the NEH project on narrative.
June 12-17	A week at Bethany is planned at the expense of ECC colleges for disseminating the critical thinking project. Three to four participants per campus are sought.
August 15	A Fipse-funded week in disseminating the critical thinking project may be staged.
September-November	Lectures and panels on Allan Bloom's book and assorted philosophers will be held at four ECC sites (Heidelberg, Hiram, Marietta, and Otterbein), if OHC funds are awarded.
October 1 or March 1 1989	The ECC proposal for a cross-disciplinary institute for 1990 on modern philosophy will be submitted to NEH.
October	Westminster will host the annual ECC conference on gender.
November 11-12	National Conference on Intellectual Skills Development conference at Grand Rapids, MI should feature a member of ECC presenters. See related news story on p. 3.

ECC NEWS

EAST CENTRAL COLLEGES

NO 87

BETHANY • HEIDELBERG • HIRAM • MARIETTA • MOUNT UNION • MUSKINGUM • OTTERBEIN • WESTMINSTER

ECC TOPICS

From Thermodynamics to Supernova

Scientists who met at Salt Fork on Oct. 23-24 saw fall colors just barely past their peak on the rolling hillsides of southeastern Ohio. And inside the mazelike lodge that invited wandering exploration, just as the outdoors did, the 38 conferees discussed a wide variety of topics.

In the evening, scientists described their own means of teaching scientific method or the advantages of (not) segregating majors from non-science majors in introductory courses. They also exchanged ideas on likely sources and likely projects for grantseeking, emphasizing recent successess ECC colleges have enjoyed.

On Saturday Sonja Krause of Rensselaer Polytech Institute explained the Second Law of Thermodynamics through poetry, slides, equations, and scientific narrative. Her thesis was that in states far from equilibrium, a certain order in dissipative structures emerges in the process of increasing entropy. Life, the appearance of order, does not therefore contradict the Second Law.

Nancy Morrison of Ritter Observatory at Toledo University described the life history of a blue supergiant star like Supernova 1987A in the Large Magellanic Cloud. The galactic explosion is a major event for astronomy, illustrating the aptness of mathematical models for the behavior of stars.

A panel of ECC scientists joined Krause and Morrison early in the afternoon to address "Women in Science." The women mentioned the absence of female role models, the significant encouragement or neglect they received from male role models, the influence that marriage and family (or the possibility thereof) have had upon their careers, and their own lack of confidence or assertiveness at varying points. Then the audience assured panelists that males can experience significant lack of confidence, too.

A good many conversations no doubt persisted during the rides home through the autumn landscape. All chairs of science departments will receive a now compiled survey of ECC scientists and equipment, already distributed to conferees. Participants will receive in the near future a modest summary of the conference proceedings.

Chilean Culture & Novels Studied at Otterbein

1987-88 is the year for Otterbein's campus-wide focus on Latin American literature and culture. Accordingly, the interterm faculty seminar from Dec. 7-11 will concentrate on Chilean literature.

John Hassett, Chair of Modern Languages at Swarthmore, will direct the week's study. Participants will read Ariel Dorfman's Widows and Isabel Allende's The House of the Spirits on December 10 and 11, after learning about recent Chilean regimes on December 7, 8, and 9.

Varied winter-term classes will read Latin American literature. In February, Ariel Dorfman, who is currently a visiting professor at Duke University and who has written 16 books in Spanish, will visit Otterbein. He has held posts as research scholar at Berkely, the Sorborne, the University of Amsterdam, and the University of Maryland.

Readers of ECC News are particulary invited to attend the February 18 lecture by Dorfman. His topic will be "Finding a Way Home: Exile Seen from a Latinamerican Perspeotive."

College Rankings

In a recent U.S. News & World Report survey on higher education, Muskingum placed ninth in the category of best liberal arts colleges in the Midwestern and Western states. Heidelberg was listed as "noteworthy" in the same category; Bethany and Westminster are also noted in the report; Otterbein tied for eighth place in the category of best smaller comprehensive colleges in the country.

The survey results are based on responses from 764 of 1,329 college presidents, who were asked to choose ten schools providing the "best" education in institutions categorized in the same way as their own institutions.

The Oct. 26, 1987 issue of U.S. News carries the full report.

Dynamic Talk on Minorities

Franklyn Jenifer, Chancellor of the Massachusetts Commission of Regents, was featured as the luncheon speaker at the recent national meeting in Boston of the Council for Interinstitutional Leadership (CIL, for consortium directors). He received a standing ovation from 40 academics, and here's why.

Jenifer spoke of the Rte. 195 approach to Boston from the south. Three years ago, he said, a driver could stop at any fast-food restaurant and find white teenagers behind the counter. Today the workers are mostly black or hispanic, and they're bussed in to work in areas where they don't yet live.

Ireland, said Jenifer, is the only white population producing youngsters at rates that compete with black or hispanic populations. The world is already more black, brown, or yellow than white. In a few years, one of every two US citizens will be black, or hispanic.

The challenge for education, government, and business is not moral but economic. Already in Boston, there are not enough construction workers to keep up with contracted building programs. The shortage will worsen. Jenifer urged his listeners to consider that in too many global controversies and even in its own educational curriculum the US has "sided with the loser"—the white hold-out. "What are we gonna do every time an -ism approaches our borders—call out the Marines?"

At the end of the CIL conference a liaison representative from the American Council on Education announced that in January 1988 presidents Carter and Ford will release one of several coming national reports that will put minority affairs on the national agenda.

Jenifer's talk was a dynamic introduction to renewed emphasis on women, blacks, hispanics and Asians.

Gender Conference Cancelled

On Wednesday, Nov.4, Bernice Sandler's father died. Sandler was the major speaker for the gender conference, scheduled for Friday, Nov. 6, at Heidelberg.

By the evening of Nov. 4 a possible replacement responded that she could not come. The decision by planners was to cancel.

Our apologies to those of you who, by the time word reached you, had already cancelled Firday classes so that you could come. The EOC Gender Steering Committee will consider whether to reschedule for sometime yet this academic year.

ECC GRANTS

Heidelberg

The Water Quality Laboratory has received $85,000 in federal grants for its Lake Erie Tributaries Loading Studies. The Office of Pesticide Programs is a first-time funding source for WQL, and the Great Lakes National Program Office is also contributing. Both are part of the Environmental Protection Agency.

Ken Davison (American Studies and History) received a grant from the Canadian Consulate General for maps of Canada to be used in coursework in Canadian studies.

Brian Bevelander (Music), Denise Marshall (English), and Ken Davison (American Studies and English) received Aigler Research Grants for the past summer. Brian completed a score called "Synthecisms," written for piano, electronics, and pre-recorded tape. British pianist Philip Mead will perform the piece. Ken has begun work on an Encyclopedia of the American Presidency. Denise continued her work on feminist comedy.

Hiram

Hiram College and the Northeastern Ohio Universities College of Medicine (NEOUCOM) have been granted $162,000 by NEH to explore the relation of humanities and the sciences in "Institute for Humanities and Medicine."

Carol Donley, (English) co-author of Einstein as Myth and Muse, will co-direct the 1988-89 program with Martin Kohn of NEOUCOM. The theme will be "Literary Texts in Medical Contexts" and will address the medical profession's usually narrow concentration on science and technology in clinical training. Topics for discussion will include literature as a vehicle for exploring medical issues in their human context, medical ethics and theology, morality and medicine.

Marietta

From May 15-21 Marietta will offer an Elderhostel, that will take participants to the Ohio River's Blennerhassett Island for birding, for on-site archaeological visits to ancient Indian village sites and the island's frontier Eden, and for a tour of Birdwatcher's Digest publication headquarters.

Mount Union

President Harold Kolenbrander, has been named the first recipient of the prestigious Deans Award, inititated this year by the Council of Independent Colleges (CIC), an organization of 250 independent liberal arts colleges. Kolenbrander is being honored for his deanship at Central College (Iowa) from 1975-86.

Nominations were selected from deans throughout the country. Allen Splete, president of CIC and former president of Westminster, presented the award in Boston in October.

Mount Union's Elderhostel runs May 22-28 and examines via videotape "Great Speakers in Recent American History," "The Functions of the Human Body: Normal and Abnormal" (eg, cardiovascular disease and Alzheimer's), and "Stories of the Spirit" (stories by Wiesel, Endo, and Sartre).

The Department of Chemistry at Mount Union has received $15,000 from the Lubrizol Foundation to upgrade the organic chemistry laboratory. A micro-scale lab will emphasize awareness of costs, toxic waste and safety, as well as other instructional purposes in undergraduate education.

The Consortium for the Advancement of Private Higher Education CAPHE) has awarded Mount Union a $13,895 matching grant to help the college develop and implement a long-range strategic plan , focusing on issues of recruitment, enrollment, finances and curricula. Nationwide, 28 colleges are included in CAPHE's $2 million initiative to develop educational programs to meet today's changing student needs.

Muskingum

Ron Mazeroski (Assistant Dean of Student Life) has received $250 from the National Association of College Activities-Great Lakes Region. Ron's project will assist in developing a course to encourage the development of leadership skills in students.

Muskingum will offer two Elderhostels this summer. June 19-25 will feature the study of Russia with Mirco Mitrovich (French, German and Russian), David Sloan (Art), and Taylor Stults (History). From July 10-16 John Adams (HPE), Andy Frey, and John Kolpitcke will offer minicourses in law, physical fitness, and music.

A New NEH Proposal

Many disciplines have changed significantly in theory and methodology, since Levi Strauss. If you're aware of that but haven't quite mastered the changes, read on.

An NEH proposal to take two ECC faculty per campus to a major research campus is in the works. Wallace Martin, Professor of English at the University of Toledo and consultant on last summer's ECC Princeton project on narrative, is working with Nancy Siferd, ECC director, to develop this project, a 6-week institute for the summer of '89. The institute would be open to faculty in any discipline.

To gather crucial and early faculty input, a dinner meeting for potential participants is being scheduled for Wed., Dec. 2, 5-8 pm. An alternate date being considered for a luncheon meeting is Sat., Dec. 5, 10am-1pm. Mount Union will be the site on either date. If you're interested, talk with your dean, who has copies for the current 4-page outlined draft. April 1 is the deadline for submission.

ECC/FIPSE PROJECT

Exchange at Otterbein

The October weekend meeting of Fipse participants showcased a number of courses revised to make the teaching of critical thinking explicit.

Among these were Art Murdoch's basic chemistry course at Mount Union. Art asks students to write essays that invite exploration of why the term "chemicals" has gone pejorative and why it should ameliorate.

Peter Macky in Religion at Westminster showed the last ten minutes of The Cuckoo's Nest on videotape and explained how he uses and provokes discussion of specific actions in the movie and their consequences as a means of helping students articulate values.

Kathy Feather in education at Hiram presented the formatted pages she distributes to students in order to help them grasp all the facets of planning a lesson.

Ruth Wahlstrom in English at Heidelberg described varied handouts of questions and the diverse writing assignments she uses (write a rock video based on an Elizabethan poem or narrate a pilgrimage to a contemporary shrine by 5 to 8 modern "pilgrims").

And Patricia Lamb of Westminster advocated the reconnection of auditory and visual images with the printed text. For example, bring in a recording of a loon's song when teaching Thoreau or of a nightingale when teaching Keats. She recommended an offbeat source—Cornell's recording from Sapsucker Woods of a whole range of birdsongs that correlate with English poetry.

Dear Pat and Joyce

[Editor's Note: I met Patricia Lamb of Westminster at the Fipse conference at Otterbein in October and was prompted the next weekend to read her published letters. NS]

All through their twenties and thirties (1953-1964), Patricia Lamb and Joyce Hohlwein exchanged soul-searching letters. In 1983 Pat Lamb (English at Westminster) edited and published with Harper and Row one-third of that correspondence.

It's a moving chronicle of deep friendship, deeper than most people know in or out of marriage, in or out of family. The title Touchstones, Letters Between Two Women is thus apt. For years both women shared details of their daily lives, their passion for books and culture, their relationships with their husbands and children, their friendships and affairs, their travels and their work, their responses to global or national trauma. Nothing, no one sustained each like the other, even when seven years lapsed between in-person visits.

If you saw and loved 84 Charing cross Road, if you marvelled that Alice Walker could successfully revive the epistolary novel in The Color Purple, if you admired the friendship between Reuben the organizer and the cotton mill worker in Norma Rae, if you were struck by the parallel lives of two very different women in the The Turning Point, if you want to compare the depth of a friendship in your own life to that of Pat and Joyce, read Touchstones.

The book did appear in paperback, and a subsequent collection of letters was printed as well. Pat reports that she and Joyce no longer write, in part because both now live in the US; during the 50s and 60s one or both of them lived abroad. The two friends do still phone each other.

ECC EVENTS

October 29

Flora Harper visited Heidelberg. In September she visited Westminster and Marietta.

November 2

Financial aid officers met at Mount Union.

November 6

Librarians met at Heidelberg.

November 18

Deans met at Bethany.

November 19

ECC Board met at Bethany.

December 1-3

Some convo chairs will attend the ORACLE meeting in Toledo to pursue block-booking.

December 5

Potential participants in an NEH institute on "Philosophy and the Disciplines" will meet at Mount Union. Wed., Dec. 2 (5-8 pm) is an alternate date.

December 7

Directors of career services will meet at Muskingum.

January 3

Grants liaisons will meet in Washington, D.C.

January 3-5

Flora Harper's workshop on grantseeking will be held in D.C.

February

Presidents will meet during the NAICU conference in D.C.